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Vol. 33, No. 5 August 27, 1962

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THE EDITORS' CHOICE

On a human ocean of acclaim bobbed the portrait of Ahmed Ben Bella. Algeria's leftist vice premier returned to Algiers after an absence of six years to dictate terms to his rivals for leadership of the new government. With the threat of a civil war seemingly removed, the city welcomed him in a paroxysm of joy and relief. But there was little jubilation in Paris or elsewhere in the West, where it had been hoped that the more moderate Benyoussef Ben Khedda might take power. At the moment Ben Bella was the man, and the world watched anxiously to see whether his glance would turn East.

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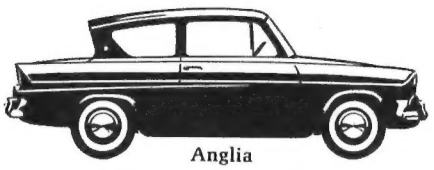

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LETTERS TO THE EDITORS

ENGLISH LANGUAGE SERIES: THE READERS REACT

Sirs:

I have read your English Language series (LIFE International, Feb. 12, Feb. 26, March 12, March 26, April 9) with interest and pleasure. My congratulations on a well-conceived and well-executed series.

KEMP MALONE
President
Modern Language Association
of America
Baltimore, Maryland

Sirs:

We Filipinos resisted the instruction of English in the beginning of the American tutelage at the turn of the century. However, by force-feeding, the American occupation teachers pushed through The-Big-Red-Apple primer. And what a blessing in disguise! Today the greatest legacy the Americans have handed down to the Philippines is the English language (Democracy is another).

Since independence 16 years ago, we Filipinos have been evolving a common native language for our national identification. But this does not mean expunging English. A country cannot legislate out a language. Like Nehru, we Filipinos see in the English language "the major window for us to the outside world." We dare not close that window either.

D. M. ESTABAYA
Cebu City, Philippines

Sirs:

On behalf of the English office of the Foreign Languages Press I would like to thank you for the extremely interesting series of articles on the English language. We congratulate Mr. Lincoln Barnett on a magnificent job. He has succeeded in summing up all his vast knowledge in a most comprehensive, succinct and unusually interesting way.

NEVENA GELIAZKOVA
Sofia, Bulgaria

Sirs:

It is said that it was Bismarck who remarked that the significant fact of the 19th Century was that England and America spoke the same language.

If Hitler had had more sense he might have noticed that the comparable significant fact of the 20th Century is that peoples of all other languages wish to add a knowledge of English to their native language—and for the reason that they believe that such a knowledge will give them the entry to that world-wide system of communication which the English language affords in large measure already and will inevitably be in itself eventually alone.

You have not yet said anything about the important improvements recently introduced to give to the printed form of the English language that higher degree of alphabeticism which would relate that which is printed to that which is spoken (rather than to some sounds which are not spoken, *e.g. once* is not related to *wuns* but to *onky*).

The alphabet was invented to make the learning of language, written *and* spoken, easier: so that those who spoke might the more easily learn to read, and those who could read could the more easily learn to speak.

A large-scale experiment with what is known as the "Augmented Roman Alphabet" is taking place now in England on the first aspect of this proposition. The principles of alphabeticism are being employed to enable English-speaking children to learn to read print (your excellent magazine as much as others): these alphabetic principles will be also employed in the teaching of English speech and English reading to those to whom English is a foreign language, and possibly the Roman alphabet's English an unknown set of characters.

JAMES PITMAN
London

▶ LIFE International's thanks to Sir James Pitman, whose efforts to improve international understanding of English are commendable. For more on his alphabet reform, readers can write to him at 39 Parker St., London W.C. 2.—ED.

Sirs:

Your interesting and excellently written series recalls for me an incident which occurred in a cigar store in Amsterdam a few years ago. When I entered the store and heard a male voice speaking English over the radio, I asked the proprietor who it was. He said it was the King of Sweden, speaking from Stockholm, making an address of welcome to the Queen of Holland. When I asked why in English, he explained that the King didn't speak Dutch, and that the Queen didn't speak Swedish, but that they both spoke English, hence the King's decision to speak in a language they both understood.

WILLIAM R. CLARK
Salzburg, Austria

Sirs:

I am clearly in excellent company and you have provided a superb setting. I have been touched and pleased by the several letters from European friends who saw and praised the series.

VICTOR LANGE
Chairman,
Department of Germanic
Languages and Literatures
Princeton University
Princeton, New Jersey

Sirs:

Please allow me to congratulate you for this series entitled "English Language" in your widely read magazine. As being a student of English myself I have very few words to say that I how much appreciate this article. I hope to benefit from it a lot. Similarly many other people like me would feel the same.

GURJENDER SINGH J.
Nairobi, Kenya

Sirs:

I simply adore the English language. I would like to describe my love in flowery, beautiful and chaste language but in spite of my acquaintance and association with the English language for almost three decades now, I have not mastered it and have not been able to make it my own. The result is that I am at a loss for words very often, and especially when I want to impress someone or wish to say something extremely clever and witty, words suddenly fail me and I grope for the right words, weakly bridging the gaps with "I means."

MRS. R. JANAKI
Madras, India

Sirs:

When I sent in the final version of my article for LIFE I mentioned in the accompanying letter that I did not know the name of the author whose poem I quoted to illustrate the difficulties of pronouncing English. I have now had three letters from Dutch correspondents who have pointed out to me that the author was a Dutch teacher, Gerhard N. Trenité, whose pen name, "Charivarius," may be the reason why his real name has not become generally known.

I had no intention of claiming Swedish authorship for the poem and am very sorry if my wording has led to this misunderstanding.

AXEL WIJK
Stockholm, Sweden

Sirs:

The English language may be a positive, definite one, yet it can't be denied that it is dry and cold. Where in it could one find the subtlety of the modulated Portuguese scale and the inflection that varies from the toughness of the commanding tone to the infinite sweetness of the words of a mother singing to sleep her newborn and to the mournful lament of the last farewell.

Yet your article says: " 'Portuguese is a tomb,' a Brazilian educator said not long ago. 'It is good only in Brazil and Portugal.' " Sorry if this is heresy but that pseudo-educator's assertion goes against reality and could only be made by one with no knowledge of the Portuguese language.

English is perhaps an easier language and one in which a word has a definite sense; but it lacks the delicacy and the sensibility that enables writers and poets to express themselves with musical tone and feeling.

J. A. OLIVEIRA JR.
Belo Horizonte, Brazil

Sirs:

My beloved mother language, Portuguese, is an almost forgotten and unknown language outside Brazil, Portugal and possessions. I regret to admit this reality. So I think every Brazilian-educated citizen must master at least some English.

ENEAS CAMARGO
São Carlos, Brazil

Sirs:

Like all your foreign readers I am very much interested by your series "How to Master English" and very happy to realize that many intelligent English-speaking people are reacting against the lunacy of the spelling of their tongue. I appreciate very much these efforts but I wonder if they are liable to be successful. For quite a long period I have been in relations with English-speaking people (most of them English) and I have been led to the conclusion that the Anglo-Saxon people use their language as a secret code, a key to a certain way of life. If you want to master the code and enter into the great English-speaking family really, you have to pay the price and adapt to your own life the English (or American) ways. The apparent easiness of the English is luring many foreigners and after a short study, they believe, poor fools, that they could be confused with native English-speaking people. Against these candid innocents the pronunciation booby traps have been laid and they are useful to filter them. Therefore only the best of them can be admitted to the selected club, *i.e.*, the English-speaking world.

R. DE WOLFF
Randogne, Switzerland

Sirs:

As a teacher of English in Finland, I should like to point out that Lincoln Barnett lists as homonyms words more accurately described as homophones.

(Football) *match* and (safety) *match* with the same spelling are homonyms, but *Finnish* and *finish* with the same pronunciation are homophones.

ADRIEN HEIGHO
Helsingfors, Finland

▶ The words *homonym* and *homophone* are virtually synonyms. Webster's Dictionary cites *bear* and *bare* as examples of both homonyms and homophones.—ED.

Sirs:

Lincoln Barnett wrote admirably as a very well informed historian, geographer, sociologist, newsman and statistician. But in the few lines in which he assumed the role of a linguist (language scientist), he erred grossly. His statement that "languages evolve in the direction of simplicity" is contrary to the historical facts we know about several modern languages. In English, for example, the distinctive sound units (technically, *phonemes*) have increased by over 25% in the last eight or nine hundred years; the vocabulary of the language, through foreign influences, borrowings, and the growing complexity of our experiences, has increased radically, and the coverage of meaning of most vocabulary items has also become wider; the grammar of the language has taken on (as substitutes for older noun, verb and other inflections) a "more complex" use of word order and grammatical words (*e.g.*, prepositions, etc.). Further, although Lincoln Barnett is right in saying that English is cosmopolitan and highly evolved, he is mistaken in saying that English has been "refined, revised, planed down and polished." All changes in the English language have come about naturally and all attempts (starting in the 18th Century) to "refine and revise" the language have been unsuccessful.

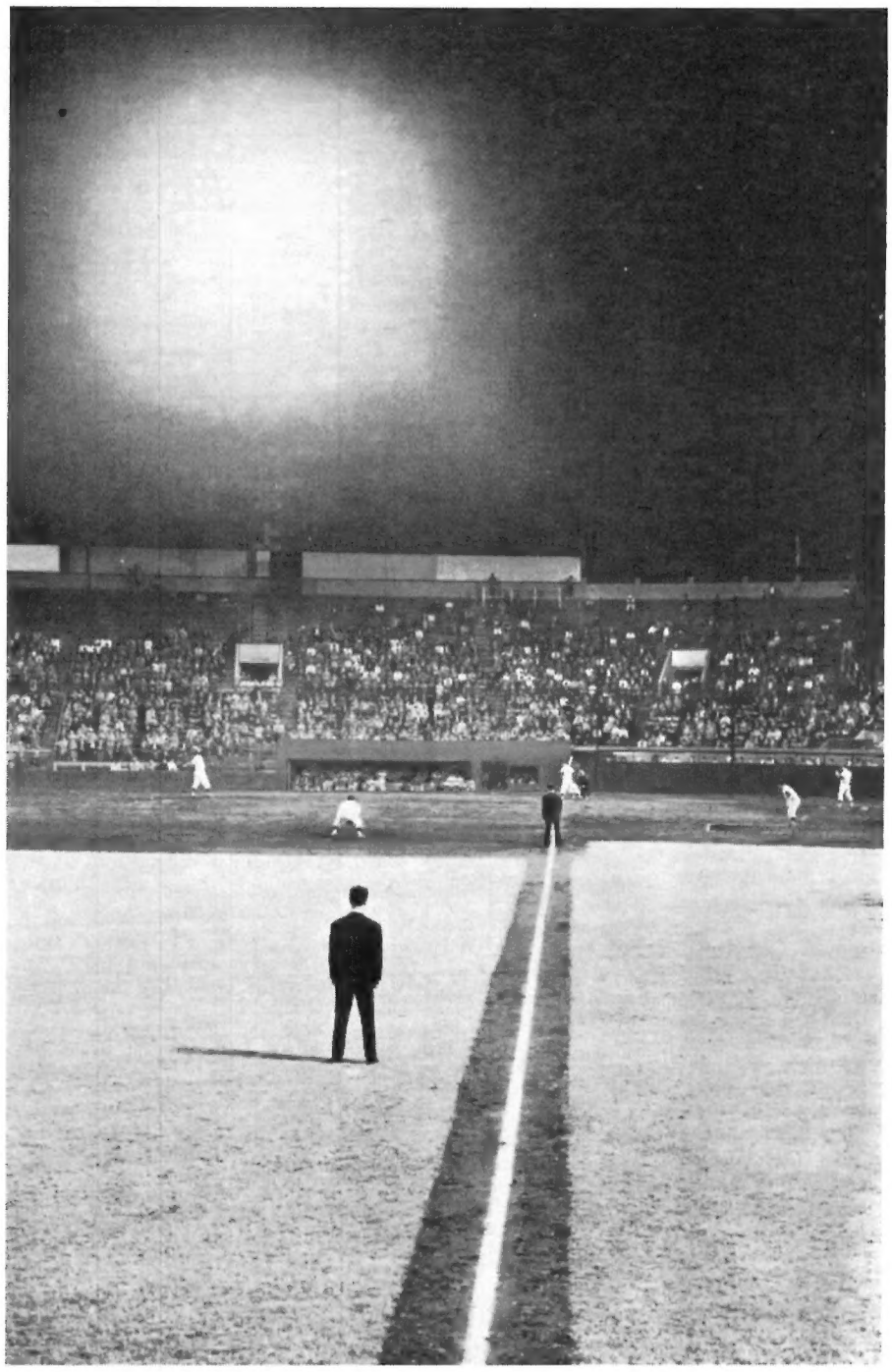
RAJA T. NASR
Chairman
Department of Education
Beirut College for Women
Beirut, Lebanon

▶ The refinements and revisions resulted from usage and Mr. Barnett did not imply that they had come about artificially.—ED.

Sirs:

Whatever its merits, the article on the English Language contains a colossal absurdity: that English has a simple grammar and is easier to learn than, say, Russian. Simple reflection should have taught the author better. It is true that English is not highly inflected, whereas Russian is relatively highly inflected. Chinese is less highly inflected than English. Then if English is easier than Russian, Chinese should be easier than English.

It is of course true that the grammar of any natural language is precisely as



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LETTERS TO THE EDITORS

complicated as the grammar of any other natural language, though obviously grammars are complicated in different ways. When English lost its inflections, it acquired other grammatical rules in compensation. Had it not done so, it would have lost power as a conveyor of information or ideas.

Any student of English as a second language will be surprised to learn that English has little grammar and is easy to master. Absolutely, no language is any easier or harder to learn than any other. The proof is that all human beings learn their native languages in about the same time. You don't have to be a particularly bright child to learn Russian or Chinese. All you have to be is Russian or Chinese.

PAUL ROBERTS
Director of the Linguistic
Program, Council on
American Studies
Rome, Italy

Sirs:

Since the four mutually unintelligible dialects of Chinese are all to be claimed as one language with 600 million speakers, then the combined Teutonic dialects of English, German, Dutch, Flemish, Luxemburger Platt, Afrikaans, Swedish, Danish, Norwegian and Icelandic have about 380 million speakers, primary language, or nearly *800 million* speaking Teutonic dialects to some degree.

KEITH W. WILYMAN
Stony Stratford, England

▶ Of the four dialects, Mandarin alone is spoken by 450 million persons, a number sufficient to rank it first. Chinese was listed as a single language, however, because the four dialects are mutually unintelligible only to the ear: when written, they are perfectly understandable by all 600 millions.—ED.

Sirs:

In Part II of your series the equivalent of "you love" is shown as *amatus* in Latin.

As a Turkish amateur student of philology, I should like to point out that the characteristic ending of verbs in the second person plural in Latin being *tis*, the equivalent must needs be *amatis*.

As for the word *amatus*, it is the past participle of the verb *amare* for the masculine gender, *amata* being for the feminine one.

FIKRET ÇATALCALI
Ankara, Turkey

Sirs:

In his article Lincoln Barnett referred to "American English" as though it was a recognized variation on an original theme. Whilst we admit that "Americanisms" have been accepted into English, we maintain that they have made no more substantial difference to the language than have the many dialects within the British Isles.

Surely the phrase "American English" is a contradiction in terms.

JILL CONIBEAR and
ELAINE PARKER
Durham, England

Sirs:

Please give my compliments to Mr. Lincoln Barnett for that excellent piece of his. He missed a nice point, however, in his list of French words which have infiltrated into the English language.

He mentions beef, mutton and pork —he forgot veal. The meat reached the table of the Norman lords as *boeuf, mouton, porc et veau.*

In the fields the livestock was tended by the lowly Saxon herdsmen as ox, sheep, swine and calf, derived from the Saxon words *Ochs, Schaf, Schwein* and *Kalb.*

The different nomenclature for the live animal and the cooked meat still prevails today, a feature found only in English and in no other language.

M. G. HARRIS
London, England

Messieurs,

Je proteste contre votre propagande en faveur de l'anglais langue internationale. En fait il y a bien d'autres langues également internationales en fait: le français par exemple.

L'humanité a cependant besoin d'une langue commune et il nous faudra nous tourner tôt ou tard vers l'adoption de la "langue internationale" ou Esperanto, la seule qui soit neutre et supranationale, la seule langue vivante qui puisse être acceptée par les diverses nations comme langue internationale de jure.

DR. ANDRE ALBAULT
Toulouse, France

Sirs:

I wish to protest in the strongest possible terms your statement that Esperanto is an "artificial, synthetic language which has never won many speakers."

Millions of people throughout the world communicate daily by this excellently designed, readily learned and beautiful-sounding "synthetic" language.

No person suggests that even for a moment we should abandon the rich heritage of our language, but I am honestly ashamed that my own fellow people, who claim sincere ambition of international understanding and peace, should be so complacent as compared to those of Communist countries, where until a few short years ago Esperanto was so severely suppressed by Stalinism.

Surely it is too much that a responsible journal such as LIFE, one of the leaders in public information and opinion guidance throughout the world, should so lightly dispose of the most active practical attempt at international understanding.

T. ELLIOTT
South Matraville, Australia

Sirs:

Why has Esperanto not made its way? Because its general introduction is absurd if not adopted simultaneously by a considerable number of countries. This would mean an enormous effort, whereas a national language obtains the role of an international one continuously or step by step. The importance of a definite endeavor, however, is emphasized by the growing integration of nations.

KLAUS SCHLÜTER
Schenefeld, West Germany

Listen Sport,

That was a bonzer article you trotted out about the English language, and it was the dinkum oil what you had to say about Aussie slang, only with that word "grafter" you were up a creek. The meaning you gave—a hard worker—went out with the blades. Nowadays it means just something like a bludger or spieler. The change came about towards the end of the last century, in fact there is an anecdote to illustrate it. . . . A young tout once asked an old big punter in Melbourne what was the drum for the Cup, and the plunger replied that he would drop him a wire later and give him his mind. The wire duly arrived and read, "For me only the worker counts." Well, this left the

tout fit to be roped for he took it to mean that the old punter was having a go at him for trying to bludge the good oil. But on the great day what should toss the lot but a moke called "The Grafter"—Fair dinkum, look up the records in Miller's Guide!

THOMAS D'ARCY
Lübeck, West Germany

Sirs:

A most interesting series. I must buy LIFE more often.

A typical example of the modern use of what many people call the American language appeared either in the New York *Daily News* or the *Mirror*, under a picture:

"Arrived in New York Actress Pampanini who out-Monroes Lolobrigida in the Jayne Mansfield department."

RODOLFO LUZARDO
Caracas, Venezuela

Sirs:

I am writing to thank you for the concluding article in your series, by Mr. Dwight Macdonald, entitled "The Decline and Fall of Good English."

I work for an international organization which uses only two official languages, English and French. I speak both languages: as I am the only person in my particular office whose native tongue is English I am often asked to explain the mysteries of this language to people who are finding it a very difficult subject to master.

How can translation be possible if words do not have a clearly defined meaning in one of the languages involved? How can one teach a language, as a foreign tongue, if that language has no rules or only rules which its principal users prefer to ignore?

In the course of my work I have to read many documents written in English, usually by Americans, and often find these exceedingly difficult to understand: frequently there are two or more possible meanings of a single sentence and one can only guess which of them was intended by the writer. If this is a result of the Structural Linguists' influence then the sooner they are outlawed, on both sides of the Atlantic, the better.

MARGARET C. GRIFFITHS
Chateauroux, France

Sirs:

I have read with much interest and, mainly, with agreement your series on the English language. I must, however, protest at the claim made by your final contributor, Mr. Dwight Macdonald that the U.S.A. is "its chief home country." The chief home country of the English language is England.

In the first place it was in England that the language evolved, and it was by the English that it was disseminated throughout the world to become the lingua franca which your articles have so rightly called it.

Secondly, the English people have remained hardly affected by immigration for nearly 900 years, whereas America's brief history has seen the constant influx of Europeans of all tongues, all making their own impression on the American version of English. (A glance down a list of American surnames will illustrate this; whoever heard of an Englishman called Hickenlooper?)

Finally, the standard of education in the Arts, including the teaching of English, is undoubtedly much higher in England than in America, as your final article very clearly shows.

In short, we still speak the language.

Apart from this presumptuous claim, Mr. Macdonald seems to be in some disagreement with himself over his own attitude on certain matters. For instance, he most rightly describes that common error—"Between you and I"—as a "horrible example," yet he condones the equally horrible "It's me," which perpetrates the same grammatic error. If he cannot say "It's I" without feeling a prig, he had better settle for "It's Dwight".

If "It's me" is to become correct (and how gruesome it sounds!) we must either legislate for the verb "to be" to have an accusative object, which is contrary to the established rule in all the languages I know, or produce a lot of tiresome rules for conjunctive and disjunctive pronouns, as for example in Italian; preserve us from both!

HUGH S. ROSE
London, England

Sirs:

We wish to make exception to the statement that the U.S.A. is the chief home country of English. This would appear to be a completely unfounded and in fact an entirely stupid assertion.

HAMISH M. FRASER
BARRY STEPHEN
Dollar, Scotland

▶ Mr. Macdonald replies: "When I called the United States the chief home base of the English language I was thinking simply of population figures and world power. Of course England is the mother country—and one that, as I stated at the end of my article, uses our sweet English tongue (if I may be allowed the "our") much better than we Americans do. It is precisely such purely American phenomena as applying Structural Linguistics to teaching and dictionaries that most threaten the English language today."—ED.

Sirs:

I have not seen Webster's Third, but if it truly perpetrates the crimes described by Mr. Macdonald, I suggest that in the interests of posterity the editors of LIFE International should take this bold course: apply to the courts for an injunction to prevent the publishers from publishing untruths calculated to mislead the English-speaking world, and call for the withdrawal or amendment of all existing copies.

I mean that, seriously. The future of human communication is at stake if those whose duty is to know better are allowed to destroy our English language wantonly.

MARK MOORE
London, England

Sirs:

I had the good fortune of reading "The Decline and Fall of Good English" by Dwight Macdonald on this beautiful Sunday morning. The very calm and imposing silence of my African surroundings, the pure, refreshing and untarnished morning breeze caressing my face added to the pleasure and contentment his message gave me.

I believe that his concluding paragraph is a landmark by which men should be guided in their speech and writings of the English language.

As everything else, so also should a language have basic and lasting standards of rules, words, grammar and usage, not only to enable the speaker and the listener or the writer and the reader to understand each other, but also to inspire confidence in the student of the language.

Change is inherent in everything, yet to welcome as a permanent part of a language localized and whimsical novelties can lead people eventually into a Babylonian Tower.

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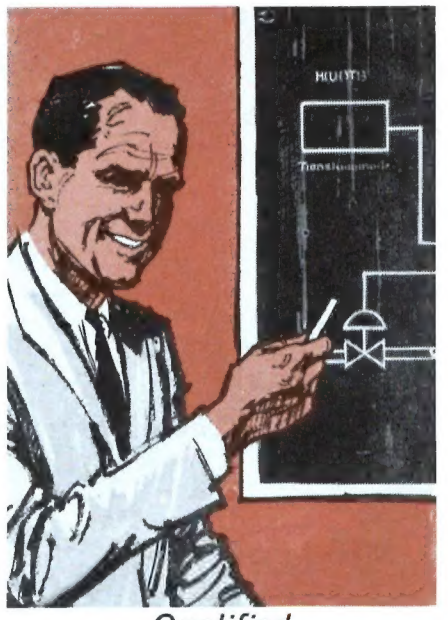

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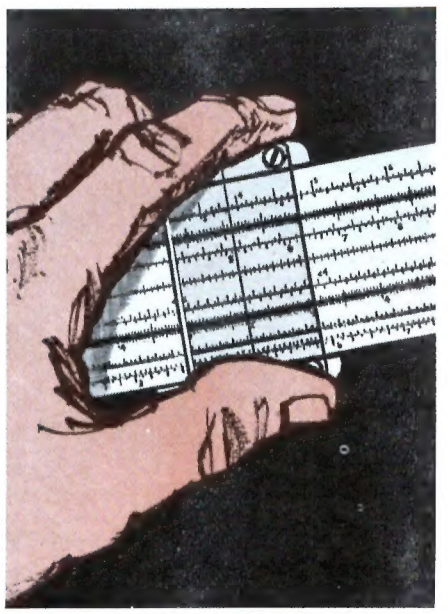

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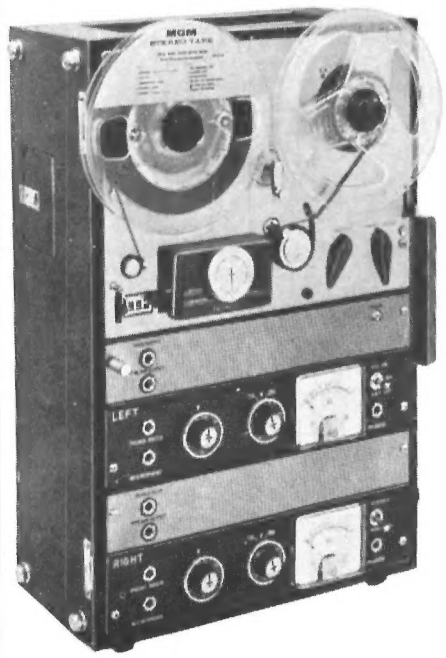

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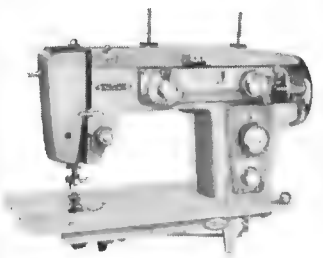

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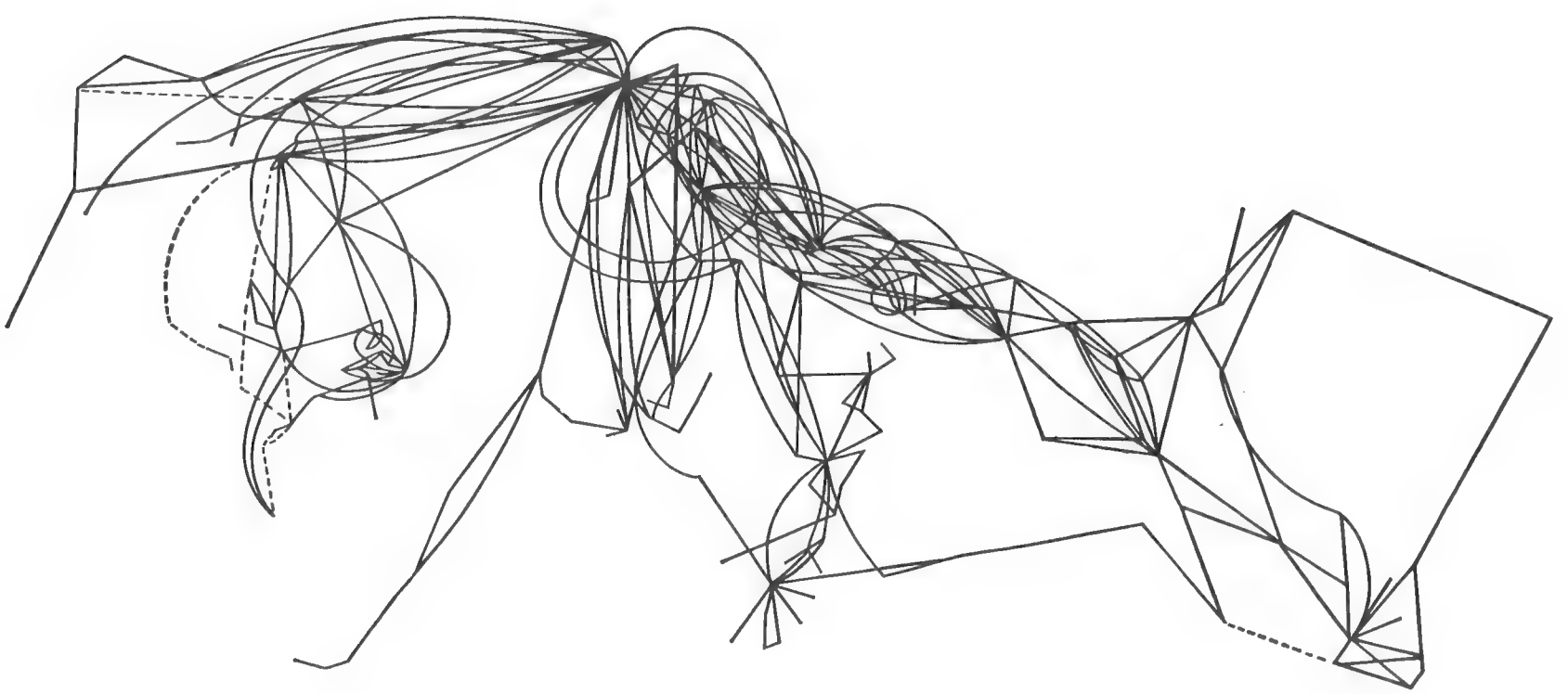

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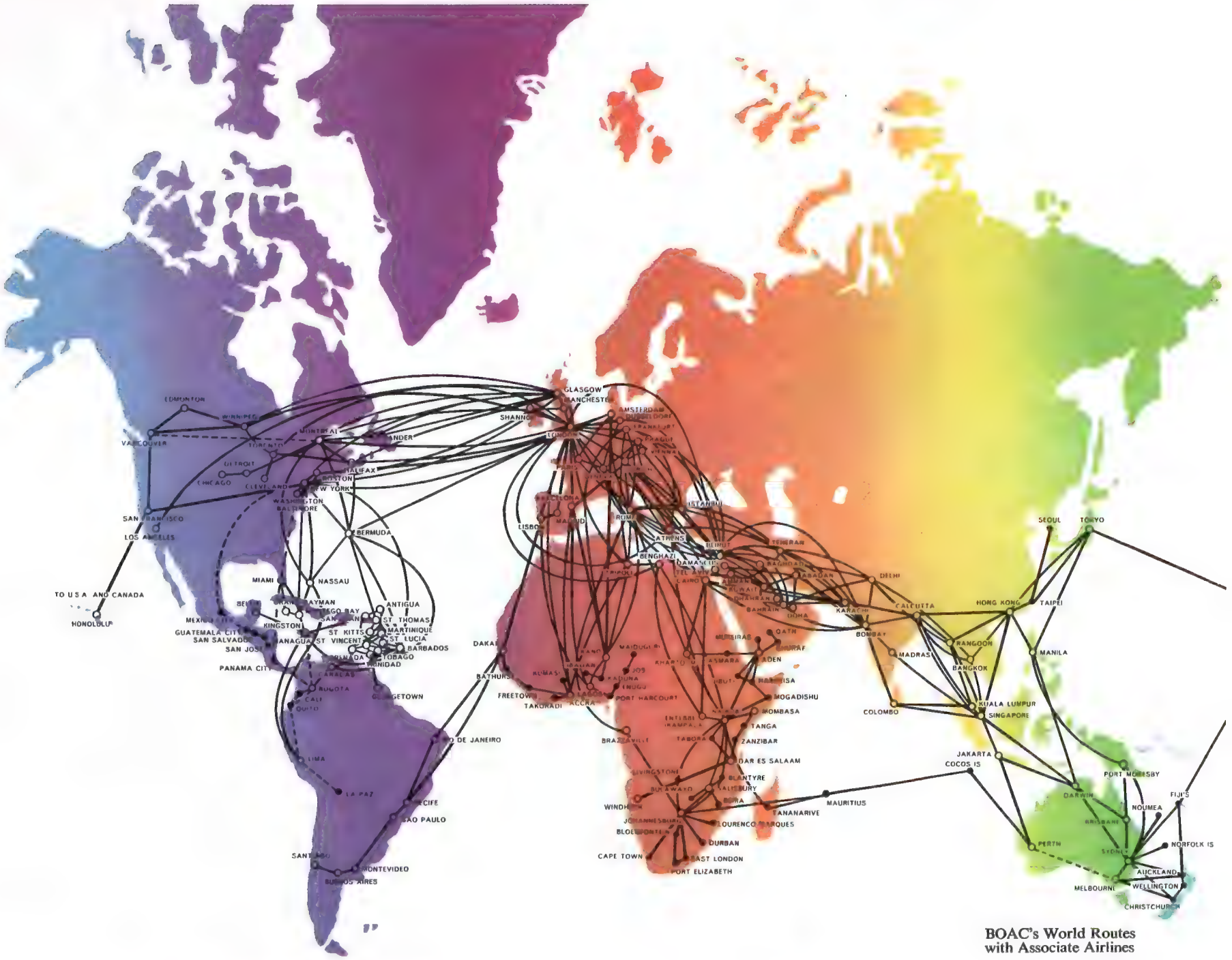

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In Arizona,
an expectant mother's dread

THE DRUG THAT LEFT

In Britain,
an armless baby's play

A TRAIL OF HEARTBREAK

Chain of eerie coincidences which unmasked

In Arizona, Mrs. Sherri Finkbine discovered suddenly that her unborn child might be cheated of its arms or legs. In Britain, Richard Satherly, 8 months old and already cheated, saw the bright gleam of his father's watch and reached for it, all unknowing—with his feet. This mother and this child lay at the end of a terrible trail left by a drug whose evils hid for many months in many countries.

It began in 1957 when a German company marketed a tranquilizer and sleeping pill made of the drug thalidomide. It seemed truly a wonder: it gave a fine night's sleep without hangover, it was not habit forming, overdoses could not kill. It was so safe that in some places it was sold without prescription. Before long, Germans were eating 15 million thalidomide pills a month, and people in dozens of other countries around the world were gulping them, under a host of trade names, by the ton.

Then quietly, ominously, came a trickle of seemingly unrelated cases of deformity in newborn babies, a heretofore rare condition called "phocomelia"—literally, "seal limbs." The babies' arms were tiny stumps or not there at all. Sometimes their legs were twisted. Sometimes they had internal deformities as well. Most had no apparent mental damage. Baffled doctors and researchers saw the trickle become a flood; they searched frantically for the cause. Parents of some of the babies began to help by tracing and reporting cases to the doctors. Slowly, desperately slowly, a pattern of coincidence began to emerge. Most of the mothers of deformed babies had taken thalidomide during the second month of their pregnancies, the month in which an infant's arms and legs are formed.

The drug was taken off the market in Germany in November 1961, England in December 1961, Canada in March 1962. In the U.S. a federal employee, pressured by a drug company to release the product here but plagued by private doubts, courageously kept it off the market for 14 months and saw her stubbornness vindicated. Despite her efforts some American women got the drug from European sources and from supplies of "test pills" distributed to doctors by the U.S. drug company. Mrs.

the crippler

Finkbine was one of the former, and soon found herself in the baleful light of public quandary, pregnant, her baby in danger, caught in an agony of moral and legal questions. The drug company squirmed uncomfortably in a spotlight of its own. Parents of the deformed babies already born—probably more than 5,000 up to now—were in a quandary too. Some, driven beyond endurance, thought the babies should be mercifully killed. But most, out of the deep wells of love and courage specially available to parents, went straight ahead trying to make the best possible path for their children. On the following pages LIFE International explores the torment of discovery and decision of the people intimately and dramatically involved.

TRACING THE DAMAGE. Dr. Oskar Hepp, director of an orthopedic hospital in Munster, Germany, which plans to fit 290 thalidomide victims with artificial limbs, studies X rays showing how drug deformed babies' legs. Typical deformities also included misshapen ears, a red blotch on forehead.

POINT OF ORIGIN. Huge Chemiewerke Grünenthal plant in Stolberg, Germany first marketed thalidomide, licensed its manufacture in other countries. The pills became available in more than 30 countries over period of four years.

VICTIM WHO SPURRED THE SEARCH. Fifteen-month-old Jan Schulte-Hillen of Menden, Germany (*left*), his arms and legs stunted, rides in a special pack on his father's back. Father began checking other births after Jan's, helped doctors trace the cause to thalidomide. Jan's mother (*above*), who expects second child, which should be normal, files case records in apartment.

CONTINUED

A WOMAN DOCTOR WHO WOULD NOT BE

CAREFUL DOCTOR. Before deciding whether thalidomide should be approved for sale, FDA's Dr. Kelsey pored over volumes of reports, blocked general distribution of drug, probably saving thousands of U.S. babies from deformity.

MEDICAL SLEUTHS. Chicago Health Commissioner Samuel Andelman (*left*) sifts pills rounded up from doctors in area. German Physician Widukind Lenz (*above*) gave the first alarm in a Düsseldorf speech in late 1961.

by JOHN MULLIKEN

The application was submitted by the William S. Merrell Co., an old Cincinnati drug firm. When it arrived on Dr. Kelsey's desk in Washington in the form of three folders, each the size of a metropolitan telephone book, it seemed to be routine enough. Merrell was asking the U.S. Food and Drug Administration to evaluate and license a drug called thalidomide which they wanted to market, by prescription, under the name Kevadon—from all accounts the perfect sleeping pill. The folders contained Merrell's complete laboratory, clinical, pharmaceutical and animal testing data, and because of thalidomide's success in Europe the firm wanted to get it on the U.S. market.

For Frances Kelsey, a pharmacologist, physician and mother of two daughters, the application seemed even easier than routine to process. But she knew her job was to move cautiously and watch for that 10th chance in 10 that the drug might be unsafe. As she began to read the contents of the folders, Dr. Kelsey became uncomfortable. "There was something a little different about this one," she explains, "so it seemed better to be safe and sure." The drug did not, for example, have the same effect on animals: they were not put to sleep by it. Dr. Kelsey knew she had to start from scratch—to treat thalidomide as though it had never been used before.

As part of the application procedure Merrell had already sent the drug out to American doctors—the number eventually reached 1,200—for testing. This was standard drug firm procedure, permitted by law even though the new drug was unlicensed. Most of these doctors, not required by law to explain to their patients that the drug was still experimental, were favorable in their reports—the drug was safe and effective, as Merrell pointed out. The company also noted the drug's European success, but Dr. Kelsey was not impressed. "We cannot check back on foreign research," she said, "and therefore we cannot rely on foreign documentation."

Under the 1938 Food and Drug Act, Merrell would have been able to market Kevadon if it had not heard from Washington within 60 days after its application for licensing. Now, to keep Kevadon out of U.S. drugstores, Dr. Kelsey wrote to the Merrell company and told them that their evidence was "incomplete."

From that moment the struggle between the "stubborn bureaucrat" and the company was joined.

"They came to Washington, it seemed, in droves," Dr. Kelsey recalls. "They wrote letters and they telephoned—as often as three times a week. They telephoned my superiors and they came to see them too." Company officials complained that Dr. Kelsey was being unreasonable and irresponsible. After all, the drug was being used in every civilized country. "Most of the things they called me you couldn't print," she says.

While company men were voicing their opinion of Dr. Kelsey to her superiors, her division boss, Julius Hauser, decided to hold fast. "When they got too thick around Dr. Kelsey," says Hauser, "I would just come in with my little hatchet and clear them out." While this kind of backing was most welcome, it could not prevent Dr. Kelsey from reading editorials like the one that appeared in a bi-weekly magazine sent to doctors, the *Medical World News*, castigating the FDA for ". . . dilatory tactics which certainly cause a loss to the industry of millions of dollars . . . and even loss of life. . . ."

Under this intensive pressure, Dr. Kelsey kept writing letters to Merrell telling them that the information in the application was still incomplete. Then in February 1961 she discovered the first item that confirmed her now 6-month-old suspicions. Buried in the letters column of the *British Medical Journal* was a note from a reader which warned that reports had been drifting in to a company marketing thalidomide in England of "a possible toxic hazard with the sedative drug . . ." and there were ". . . signs suggestive of peripheral neuritis in patients receiving thalidomide for periods of six months or more."

Over the next few months other cases were reported. There were strong indications that the drug could cause numbness, shaking, tingling of hands and other motor and sensory disturbances. Dr. Kelsey was not jubilant, for this was not that kind of victory. She was simply relieved to know that she was right.

The Merrell company, meanwhile, though unconvinced that the drug was toxic, had sent investigators to check out the British reports. Their findings were inconclusive: no clear connection, they insisted, had been established between thalidomide and the neuropathy cases. For one thing the rate of incidence, then one in every 3,000 cases, was too slim to count. For another, the company speculated, they were showing up mainly in older people who probably were badly fed and had vitamin deficiencies. Dr. Kelsey tried to understand Merrell's attitude. "It must be a lot different when you have invested in developing a drug. I guess they and I differ over how important the safety of a drug which is issued in a fairly trivial fashion must be." She argued that anything which was handed out as easily as the Germans had distributed Contergan (their name for thalidomide) could, in the U.S., be passed from one neighbor with a prescription to another neighbor without one, without second thoughts or warnings.

The company then asked Dr. Kelsey if she would approve the drug if they attached a label announcing that it might cause certain reactions. As late as October, they were reminding her that if she did not hurry, they would "miss the Christmas market." Dr. Kelsey refused to hurry. She wrote a letter every time it was

HURRIED . . .

necessary, to keep the drug off the market. "Needless to say, now there were many people telling me when the 60 days were up," she remembers.

Then at the end of November everything fell into place. All her suspicions, all her patience turned out to have been worthwhile.

From West Germany it was reported that a Dr. Lenz had made a speech indicating that some drug might be causing the phocomelia "epidemic" which had been spreading in his country for the last three years. In his speech Lenz had not named the drug, but afterward another doctor had come to him and asked, "Will you tell me confidentially, is it the drug Contergan? I ask because we have such a child and my wife took Contergan." Lenz had to admit that it was.

Other tragic stories began to filter back to Dr. Kelsey from Australia, Scotland, Sweden, Belgium, Switzerland, Lebanon, Israel and Peru, all concerning women with deformed babies who had taken thalidomide.

On Nov. 26 Contergan was withdrawn from the German market. Merrell, which actually informed Dr. Kelsey of the Lenz discovery, held up further consideration of Kevadon by the FDA upon hearing of the speech in November and immediately sent their investigators back to Europe. In March they formally canceled their application.

While Dr. Kelsey's stubbornness has prevented uncounted tragedies, it has also brought her unlooked-for honors. President Kennedy, with a speed unprecedented in such matters, presented to her the President's Award for Distinguished Service, a gold medal and a citation constituting the U.S. Government's most important encomium to a civilian. It was a recognition universally applauded. A woman of fortitude and determination had proved that the wheels of progress should occasionally be slowed and examined.

UNDER FIRE. Ranged in front of their headquarters plant at Reading, Ohio, senior officers of the William S. Merrell Company face criticism with official defense of their procedure in attempting to market thalidomide. Board Chairman Nelson M. Gampfer stands at left next to Dr. Carl A. Bunde, the director of medical research.

. . . A U.S. DRUG FIRM'S SHOCK

The following statement was written by the director of medical research of the William S. Merrell Company.

by DR. CARL A. BUNDE

For eight months since last Nov. 30, we have lived with the first heartbreaking reports associating malformed infants with the mother's use of thalidomide. Every day since then the awful problem has been a part of our hearts as human beings and a part of our daily scientific research. Although the facts available to us at first were fragmentary and confusing, we sought to warn physicians of the reported effects and to communicate swiftly what we had learned to the appropriate governmental agencies here and in Canada.

Thalidomide was first prepared in 1953 by a recognized and respected West German chemical concern. By September 1957 it had been tested by methods which were historically adequate. In January 1959—15 months after the drug went on the market in West Germany and three years after the first human patients had reported good clinical results—Merrell began research. In our testing of thalidomide we followed the normal course of all responsible American pharmaceutical manufacturers. We were not in a hurry. We spent 20 months testing the drug in our laboratories and through distribution to selected physicians.

It was not until September 1960 that Merrell submitted its findings, together with the data from abroad, to the Food and Drug Administration in Washington. There were significant differences between our program and that carried on in Europe. Our physician investigators had not been selected for the purpose of testing the drug in early pregnancy. No recommendation was made to the investigators to measure the drug's effect on nausea of early pregnancy. Our research program was directed toward development of a prescription for use in older patients, hospitalized patients and in certain special situations such as orthopedic and psychiatric cases.

In our trials the drug appeared both safe and effective. From September 1960 to November 1961 there were differences of scientific opinion between Merrell and medical officers of the FDA. This was not the first time, nor will it be the last, when scientists disagree. Some 50 questions were asked of Merrell by the FDA, covering everything from details of chemical analyses to improved translation of foreign data, to the request to inspect the thalidomide-producing plant in West Germany, to mixing methods in manufacture, to appropriate use of the drug in late pregnancy and to the potential side effect, peripheral neuritis.

In view of the complexity of the questions and answers, it was not surprising that there were contacts back and forth to supply information. This is not an unusual procedure in the FDA's review of many modern-day drugs.

According to Merrell records there were in a 14-month period 58 contacts between the FDA and Merrell —by personal visits, telephone or letter. The FDA initiated 10 of these contacts. In 22 cases Merrell was providing required information to the FDA. In all but five of the 48, the contact at the FDA office in Washington was made by a single individual. In one case a conference with eight doctors was held. Beyond this, no more than two persons from Merrell visited the FDA at any one time.

The question of peripheral neuritis (inflammation of the nerves in the extremities) took the most time. Merrell took the lead in February 1961 by investigating reports of this possible side effect when they appeared in the *British Medical Journal.* We immediately requested further information from London. We sent two of our scientists to Europe. We promptly reported to the FDA on the results of this inspection trip.

At the time of a conference with the FDA in September 1961, two U.S. cases of the reported side effect had not completely cleared. Both cases were recently reported cleared.

There was discussion between Merrell and the FDA on the question of the drug's effect during pregnancy. Until last November we had not heard a whisper of suspicion from anywhere in the world that the drug could affect the unborn.

On Nov. 30, within hours after we received the shocking report of the drug's possible association with phocomelia, we telephoned the FDA. The new drug application then became inactive. Two of our scientists rushed to the Food and Drug Directorate in Ottawa, Canada. Two physicians flew to Europe to gather information at first hand. Immediate warning went out to our active clinical investigators not to give the drug to women who were or might become pregnant.

Our first information from Europe was incomplete. Among the first 20 case reports sent us, more than half the mothers appeared to have had no record of having used thalidomide in early pregnancy. In many cases the record showed use of from two to 12 other drugs. Other factors also clouded the issues.

The collection of meaningful data has been unusually difficult. We have not minimized the possibility that thalidomide may be connected with congenital malformation in some way not now understood. One is struck by reports of an increase in frequency of this terrible malformation and by the need for strenuous effort to determine the truth whatever the cause.

We have offered all our resources to the FDA and to the American Medical Association. In the past month we have made available to the FDA the case record material which came to us from Europe. For eight months we have been searching and we will continue to search until we come up with the answer.

WARNING: DON'T TAKE THESE

Thalidomide, straight or mixed with other drugs, has been sold under the 49 trade names listed below. If you have any of these drugs, turn them in to your doctor immediately.

Algosediv
Asmadion
Asmaval
Bonbrrin
Calmore
Contergan
Coronarobetin
Distaval
Ectiluran
Enterosediv
Gastrinide
Glutanon
Grippex
Imidan
Imidene
Imidene Ipnotico
Isomin
Kevadon
Lulamin
Neo Nibrol
Neosydyn
Neurosedyn
Nevrodyn
Noctosediv
Noxodyn
Poly-giron
Polygripan
Predni-sediv
Profarmil
Psycholiquid
Psychotablets
Quetimid
Quietoplex
Sanodormin
Sedalis
Sedimide
Sedin
Sediserpil
Sedoval K17
Softenil
Softenon
Talimol
Tensival
Thalin
Thalinette
Theophilcholine
Ulcerfen
Valgis
Valgraine

CONTINUED

DECISIVE DAY. Her mind made up to have abortion abroad, Sherri Finkbine packs her suitcase in her bedroom while daughter Tracy waits to hand her a hairbrush.

Abortion—with the future

"My husband and I," says Sherri Finkbine, "had settled down to a seven-month wrangle on what to name the baby."

She did not realize what a simple decision it would have been. A few weeks later she was no longer thinking about what to name the baby. She was trying to decide whether to have the baby at all, the racking moral question of abortion.

Her husband, a teacher in Scottsdale, near Phoenix, Arizona, had bought tranquilizing and sleeping pills on prescription from a druggist in England. Mrs. Finkbine, the mother of four normal children and moderator of the *Romper Room* program on a local TV station, was nervous about being pregnant again. She took some of her husband's pills—"about 40 of them."

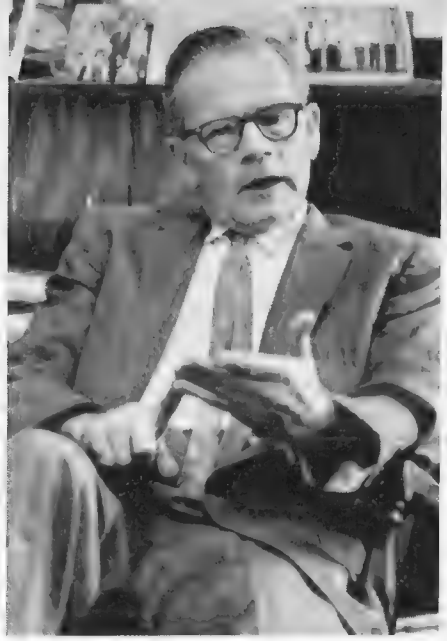
Shortly after, she read an article about thalidomide. Wondering about the pills, she asked her doctor. He cabled England to find out what they were.

"I wasn't upset," Mrs. Finkbine told LIFE's David Nevin. "That medicine from Europe couldn't be sitting in my home, on my kitchen shelf, waiting for me."

But when the doctor got the answer to his cable, he asked her to come to his office. "He told me to come the next day," she remembers. "I said how about Monday, and he said no, tomorrow."

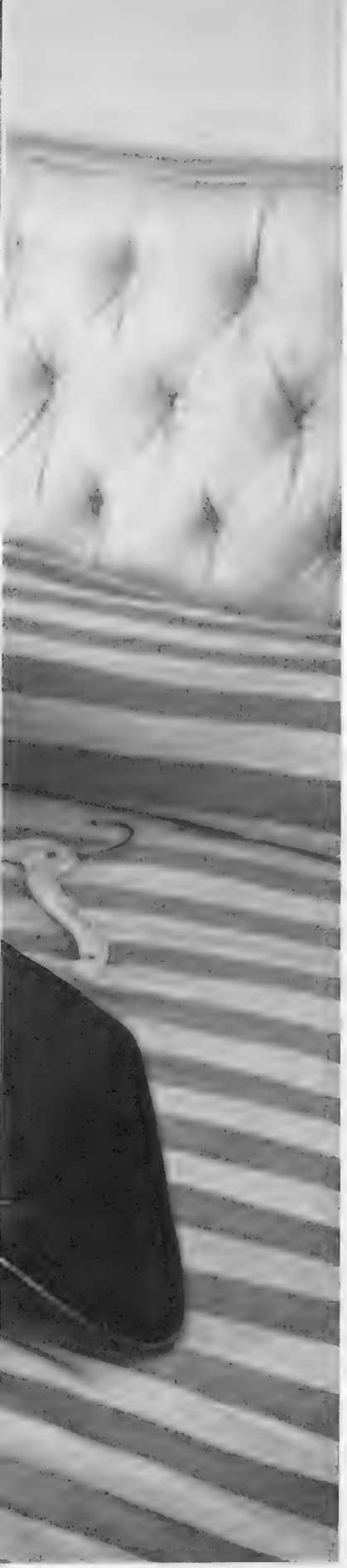
When she saw the doctor, he said, "Sherri, you've been taking pure thalidomide." She remembers her first reaction as shock. "You just don't know what you feel. It is like someone telling you your child has been run over by a truck. You know it will affect you, it will hurt you, but like when you burn yourself, you don't feel anything at first."

Then the doctor showed her pic-



ARM OF THE LAW. County Attorney Charles Ronan, a father of nine, said he would prosecute if abortion took place.

AGITATED HUSBAND. Robert Finkbine (*center*), Sherri's husband, confers with two lawyers in Phoenix courtroom after the judge had dismissed the suit that Finkbines and the hospital brought to try to make Sherri's abortion legal.



SHERRI AND CHILDREN. Waiting for court decision, Sherri Finkbine sits with Mark, 6 (*left*), Steve, 4, and Tracy, 20 months. Her fourth child was away visiting.

dim, should the unborn die?

tures of babies believed injured by the drug. "That did it," she says. "Those babies weren't just deformed. There were no arms, and there were fingers coming out of things." The doctor recommended an abortion.

"Naturally I had misgivings," she said. "There is life there. Do I have the right to take it? But is it life when you can't dress yourself, run, walk, dance, play games, have dates? If I had no choice, I would have the baby. But I have the way to prevent this tragedy, this sadness." Mrs. Finkbine made arrangements to have an abortion at the Good Samaritan Hospital.

In Arizona, as in most other states, abortion is a crime unless it is necessary to save a mother's life. Evidently the hospital felt that Mrs. Finkbine's case involved her life, and it went ahead with plans for the operation.

But Mrs. Finkbine thought that other expectant mothers might profit from the warning she had received by accident. She told her case anonymously to an Arizona newspaper. Wire services moved the story all over the world. As publicity grew, the hospital asked a judge to rule on the prospective abortion. He threw out the case on technical grounds.

The Finkbines and her doctor felt there was no more time. Her pregnancy was in its third month, after which an abortion becomes much more dangerous. She packed her bag and left to have her abortion in Sweden, where such operations are legal.

She made her decision in spite of pressure, a deluge of letters, phone calls and offers to adopt the child —if she had it—whatever its condition. She made it in a legal, moral and religious climate which questions one human's right to take the life of another, even unborn.

CONTINUED

EUTHANASIA—SHOULD ONE KILL A CHILD

by RICHARD OULAHAN JR.

In Liège, Belgium last May, Suzanne Vandeput-Coipel, a pretty typist, gave birth to a little girl with no arms and only winglike stumps of fingers sprouting from her shoulders. Like thousands of other European women, Mme. Vandeput had taken thalidomide during her pregnancy. When she saw her grotesquely deformed child for the first time, she became hysterical. "We cannot let it live," she cried, "—for its own sake and for mine." Doctors tried to reason with her but she was adamant. On the day she left the hospital, the young mother put a lethal dose of a sedative in the infant's bottle, she says. By morning the baby was dead.

Suzanne Vandeput was promptly

STORM CENTER. Mrs. Suzanne Vandeput-Coipel stirred up a storm by killing her malformed daughter.

arrested and charged with infanticide, along with her husband, her mother and her sister, who were booked as accomplices. Dr. Jacques Casters, who had prescribed thalidomide for Mme. Vandeput before she became pregnant, was arrested later. While thousands of letters pour into the Palais de Justice, urging clemency, the five await trial some time in November.

When the case broke in the Belgian press, a controversy over euthanasia —mercy killing—erupted all over Europe, and, with the ordeal of Mrs. Finkbine, spread to the U.S.

Mercy killing has been a topic of controversy since biblical times, and it is most severely condemned today in Christian countries. Yet euthanasia is widely—if illegally—practiced by doctors everywhere. Merely by delaying or failing to start respiration in a monstrous baby at birth, or by removing the oxygen mask from a dying and pain-racked adult, many a doctor has deliberately, and compassionately, ended a life. At a recent medical meeting in the Midwest, doctors were asked to raise their hands if they had never practiced euthanasia. Not a hand was raised.

In the furor that has resulted from the thalidomide cases, many doctors and lawyers were in favor of legalized euthanasia, while many theologians and clergymen predictably denounced it as a sin and a crime. But public opinion, which had generally been against mercy killing, seemed to have shifted dramatically. Radio Luxembourg put the question "Would you condemn the Liège mother?" to its audience and received an avalanche of emotional replies—16,732 votes for acquitting Suzanne Vandeput, 938 finding her guilty. And in Britain a nationwide public opinion poll produced some startling answers: more than two thirds favored legalized abortion and euthanasia.

In the U.S. there was no current sampling of public opinion (a 1950 Gallup poll showed that 43% favored euthanasia, 46% were opposed and 11% had no opinion), but the air was electric with individual comments. Dr. Helen Taussig of Johns Hopkins University was positive on the subject: "In my opinion, euthanasia is the part of kindliness when no hope exists for life to be or to become of significance. The difficulty lies in determining when this is the situation, for example in advanced cancer or progressive degenerative mental illnesses. The duty of the physician is to relieve suffering and to enable the person to live a fuller life, but not to maintain life as long as possible. When there is no chance for improvement or for life to attain significance, it does not seem to me to be humanitarian. Euthanasia should require the opinion of a well-qualified team of experts to prevent abuse. Furthermore, as no two cases are identical, no hard and fast rules can be laid down. Each case requires individual consideration of all the factors."

In Vancouver, Dr. Brock Chisholm, retired head of the World Health Organization, said, "We should have faced this issue long ago, of whether the grossly crippled should be encouraged to live or not. The institutions are full of idiots with no brain at all. [There is no indication that the deformed babies have suffered any mental damage.] They were never of any use to themselves or anyone else. I do think there is no good in keeping humans alive who can never be human beings."

However, doctors were far from being united in support of euthanasia. Many were reluctant to comment. In the midst of a debate in the British Parliament over a proposal to legalize euthanasia—it was rejected—a spokesman for the British Medical Association said flatly that "even if it were permitted by law, few doctors would have anything to do with it." Even among medical men who opposed mercy killings there was considerable soul searching. "I'm a practicing Catholic and therefore against euthanasia, but I cannot condemn my Liège colleague," wrote a Brussels physician. "I've thought about what I would do in the same case, what if I myself had prescribed [thalidomide] and she came to me and told me, 'You're morally responsible.' Would I have the right to condemn the woman to raise such a deformed child?"

Churchmen generally spoke out against euthanasia, although there were many who were discomfited when the question was raised, and some who felt that Sherri Finkbine was right in seeking an abortion. "This is not an abortion in the ordinary sense, where ignoble values are taken into account," said Dr. Nathan A. Perilman, the rabbi of New York's Congregation Emanu-El. "Where there is such a high degree of risk to the well-being of the family, I would seek such medical assistance for my own family, and would find no moral error in another's use of it."

The Reverend Canon Peter Chase, pastor of the Episcopal Cathedral of St. John the Divine in New York, was uncertain: "Life is desperately sacred to the Christian, and to interfere with it in its unborn stage raises intense moral questions apart from the legal ones. . . . There is nothing existing in the form of an official ecclesiastical statement which precisely deals with the issue of the moment."

To Roman Catholics the issue presented no dilemma: euthanasia, suicide, direct abortion, or any other willful destruction of human life is a mortal sin, under Church law. "To deliberately terminate the life of another human being on private authority is, in one word, murder," said an editorial in the authoritative Jesuit weekly, *America*.

Euthanasiasts have long contended that the scruples of religionists have no foundation in sacred writings. The Fifth Beatitude, "Blessed are the merciful," is, they say, as binding on Christians as the Sixth Commandment, "Thou shalt not kill." In his book *Morals and Medicine*, Dr. Joseph Fletcher, an Episcopal minister and educator and a director of the Euthanasia Society of America, defends euthanasia with a quotation from Ecclesiastes: "There is . . . a time to be born and a time to die, a time to plant, and a time to pluck up that which is planted."

The staunchest advocates of euthanasia, though, were in some disagreement over the morality of taking the lives of newborn or unborn babies. In an official statement, the British Euthanasia Society took an unusual view: "We have tremendous sympathy with this situation but we would only support euthanasia at the request of the person concerned, who must be an adult in his right mind, suffering from an incurable disease." The Society had pointed up the overriding question that plagues all who speak in favor of euthanasia: if mercy killing ever becomes legal, who will make the life or death decision? Will it be the doctors or government officials or the families of doomed patients? Must a person request—or consent to—his own death? And how can such a law—with all the variegations to which it must apply—be drawn up?

For the poignant causes of the worldwide controversy, the thalidomide victims themselves, there was hope. Armless, legless, or even totally without limbs, they can be helped to lead useful lives. They can have the gift of parental love and enjoy the companionship of other human beings. Surgery and artificial limbs and special training have improved the

. . . OR IS

UNITED FAMILY. The Satherlys responded with love and hope to their armless baby (*shown also on page 15*). His sister hugs him (*above, right*), and his father investigates with him the use of artificial limbs at a hospital.

IN MERCY

lot of thousands of gruesomely crippled people. In a testy letter printed in the London *Observer*, Dr. David Kerr denounced euthanasia as a solution to the problems of the deformed babies. "Provided other congenital deformities do not further handicap them, limbless babies present us with problems which are more readily capable of solution than, for example, severe mental subnormality or even congenital spastic paralysis," he wrote. "We can never avoid or ameliorate our social and ethical mishaps by killing them."

LIFE, HOWEVER HARD, TOO DEAR TO LOSE?

LAST VISIT WITH A

Only a few weeks before her death at the age of 36, Marilyn Monroe talked at length to LIFE *Associate Editor Richard Meryman about the effects of fame on her life* (LIFE *International, Aug. 13*). *Here Meryman recalls what she was like as she talked.*

by RICHARD MERYMAN

If Marilyn Monroe was glad to see you, her "hello" will sound in your mind all of your life—the breathless warmth of the emphasis on the "lo," her well-deep eyes turned up toward you and her face radiantly crinkled in a wonderfully girlish smile.

I first experienced this when, after two get-acquainted meetings in New York, I came in the late afternoon several weeks ago to her Brentwood, California home to begin a series of conversations on fame. Expecting one of the famous waits for Marilyn, I sat on the soft wall-to-wall carpet of the living room and began struggling to set up my tape recorder. Suddenly I became aware of a pair of brilliant yellow slacks upright beside me. In the slacks was Marilyn, silently watching me with a solicitous grin, very straight and slender with delicately narrow shoulders. She appeared shorter than I remembered and she looked spectacular in a loose-fitting blouse. I stood up and we greeted and she said, "Do you want my tape recorder? I bought one to play the poems of a friend of mine."

Before starting what was to be no less than a six-hour talk, she wanted to show me her house which she had personally searched out and bought. Describing it earlier she had exclaimed, ". . . and it has *walls*." She had refused LIFE any pictures of it, saying, "I don't want *everybody* to see exactly where I live, what my sofa or my fireplace looks like. Do you know the book *Everyman*? I want to stay just in the fantasy of Everyman."

It was a small, three-bedroom house built in Mexican style, the first home entirely her own she had ever had. She exulted in it. On a special trip to Mexico she had searched in roadside stands and shops and even factories to find just the right things to put in it. The large items had not arrived nor was she ever to see them installed. As she led me through the rooms, bare and makeshift just as though someone lived there only temporarily, she described with loving excitement each couch and table and dresser, where it would go and what was special about it. The few small Mexican things—a tin candelabra, folding stools ingeniously carved from single pieces of wood, a leather-covered coffee table, tiles on the kitchen walls—revealed her impetuous, charming taste. Separate from the house, attached to her two-car garage, was a large room being converted to an apartment which would be, she explained, "a place for any friends of mine who are in some kind of trouble, you know, and maybe they'll want to live here where they won't be bothered till things are OK for them."

Back in the house I remarked on the profusion of flowers outside. Her face grew bright and she said, "I don't know why, but I've always been able to make anything grow." She went on: "When I was married to Mr. Miller, we celebrated Hanukah and I felt, well, we should have also a Christmas tree. But I couldn't stand going out and chopping off a Christmas tree."

In the living room, seated on a nondescript chair and sofa, we went on talking—after Marilyn poured herself a glass of champagne. At each question she paused thoughtfully. "I'm trying to find the nailhead, not just strike a blow," she said. Then a deep breath and out her thoughts would tumble, breathless words falling over breathless words. Once she said, "One way basically to handle fame is with honesty and I mean it and the other way to handle it when something happens—as things have happened recently, and I've had other things happen to me, suddenly, my goodness, the things they try to do to you, it's hard to take—I handle with silence."

Her inflections came as surprising twists and every emotion was in full bravura, acted out with exuberant gestures. Across her face flashed anger, wistfulness, bravado, tenderness, ruefulness, high humor and deep sadness. And each idea usually ended in a startling turn of thought, with her laugh rising to a delighted squeak. "I think I have always had a little humor," said Marilyn. "I guess sometimes people just sort of questioned, 'does she know what she's saying,' and sometimes you do all of a sudden think about something else and you didn't mean to say it exactly. I don't digest things with my mind. If I did, the whole thing wouldn't work. Then I'd just be kind of an intellectual and that I'm not interested in."

At this point I began to see that Marilyn did nothing by halves. Of her millions of fans she said, "The least I can do is give them the best they can get from me. What's the good of drawing in the next breath if all you do is let it out and draw in another?" I saw also how important it was to her to feel that the person she talked to "understood."

Understanding apparently meant being very sympathetic, taking her side in everything, recognizing the nuances of her meanings and valuing all that she valued, especially small things. When I showed genuine enthusiasm for her house, she said, "*Good*, anybody who likes my house, I'm sure I'll get along with."

But I had the constant, uneasy feeling that my status with her was precarious, that if I grew the least bit careless she might suddenly decide that I, like many others she felt had let her down, did not understand. Once I slangily asked her how she "cranked up" to do a scene. I was instantly confronted by queenly outrage: "I don't crank anything. I'm not a Model T. I think that's kind of disrespectful to refer to it that way."

But I could not feel impatient with her impatience. It was all so understandable as she talked about the people who wrote columns and stories about her: "They go around and ask mostly your enemies. Friends always say, 'Let's check and see if this is all right with her.' " And then she added wist-

LONELY GIRL

Poignant Final Days of Marilyn Monroe

fully: "You know, most people really don't know me." There was grief in her eyes when she described how she had once found her stepson Bobby Miller hiding a magazine containing a lurid article about her, and how Joe DiMaggio Jr. used to be taunted at school because of her. "You know, ha, ha, your stepmother is Marilyn Monroe. Ha, *ha*, *ha*, ha. All that kind of stuff."

And there was yearning in her voice as she returned over and over again to "kids, and older people and workingmen" as a source of warmth in her life, as the unthreatening people who treated her naturally, whom she could meet spontaneously. I felt a rush of protectiveness for her; a wish—perhaps the sort of wish that was at the root of the public's tenderness for Marilyn—to keep her from anything ugly and hurtful.

Before I left late that night she asked to be sent a transcript of the interview. "I often wake up in the night," she explained, "and I like to have something to think about."

When I arrived the next afternoon for a second session she immediately asked to postpone our talk. She was tired out, she said, from negotiations with 20th Century-Fox over resumption of *Something's Got to Give*. But she hospitably offered me a drink and we chatted. She was obviously upset. But there was no hint of morose despair. She was electric with indignation and began talking angrily about how studios treat their stars. Then she paused, said she needed something to help overcome her tiredness and got a glass of champagne. I asked if she ever wished she were tougher. She answered, "Yes—but I don't think it would be very feminine to be tough. I guess I'll settle for the way I am."

We were interrupted when her doctor arrived. Marilyn bounded out to the kitchen, returned with a little ampule, and holding it up to me said, "No kidding, they're making me take liver shots. Here, I'll prove it to you." By then she was willing to talk on and it was nearly midnight when Marilyn jumped up and announced she was going to throw a steak on the grill. She came back to say there was no steak and no food at all. Before I left one of the last things she said was, "With fame, you know, you can read about yourself, somebody else's ideas about you, but what's important is how you feel about yourself—for survival and living day to day with what comes up."

Over the weekend Marilyn was scheduled to pose for pictures so I suggested we eat breakfast before her noon appointment. She agreed and I arrived on Saturday at 10. I rang the doorbell repeatedly. No answer. But through the window I could see a man sitting in her little glassed-in porch, reading a magazine with the resigned patience of somebody who had been there a long time. I waited and rang for 10 minutes, then went away for an hour. At 11 my ring was answered by Marilyn's housekeeper, Mrs. Murray, who took me to wait in a guest room just off a tiny hall from Marilyn's bedroom. At noon Mrs. Murray took a tray of breakfast in to her. Shortly afterward Marilyn came out and said hello.

I then became a witness to the fabled process of Marilyn preparing for an appointment—and being four hours late for it. The patient gentleman was her hairdresser, Mr. Kenneth. While he worked on her and she sat under the dryer I could hear uproarious laughter. Then, in her curlers, she made little barefooted errands about the house and in and out of her room, phone calls, visits to me to ask if I was comfortable, all busy bustling, getting nothing done. There was none of the fearful moping and the preening in front of mirrors I had heard so much about. She was entirely cheerful and utterly disorganized. I could not help feeling that what some people blamed on stagefright might partly be her endless debt to time. The necessary mechanics of daily living were beyond her grasp; she always started out behind and never caught up.

Finally she was almost ready and she came trippingly into the room where I sat. She wore high heels, orange slacks, a brassiere, and held an orange blouse carelessly across her bosom. "Do I look like a pumpkin in this outfit?" she asked. She looked wonderful. "You'll set the fashion industry ahead 10 years," I said. She was very pleased and answered, "You *think* so? *Good*!"

Two days later I called Marilyn for another appointment to talk over the final draft of her story. She said, "Come anytime, like, you know, for breakfast." There was in her voice a note which I had come to recognize—an appealing eagerness to please. I came again at 10 and once again she slept till noon. Finally we sat down together on a tiny sofa. She was barefooted, and wearing a robe, and had not yet washed off last night's mascara. Her delicate hair was in a sleep-tumbled whirl. But she had made me feel this was a compliment. "Friends," she had said, "accept you the way you are." As was usual, her face was very pale. She held the manuscript high in front of her eyes and carefully read it aloud, listening to every phrase to be sure it sounded exactly like her.

She kept the manuscript and I returned for it late that afternoon. Standing on the steps of the house she showed me changes she had penciled in, all of them small. She asked me to take out a remark about quietly giving money to needy individuals. And then we said goodbye. As I walked away she suddenly called after me, "Hey, thanks." I turned to look back and there she stood, very still and strangely forlorn. I thought then of her reaction earlier when I had asked if many friends had called up to rally round when she was fired by Fox. There was silence, and then, sitting very straight, eyes wide and hurt, she had answered with a tiny "No."

In stony grief Joe DiMaggio and his 21-year-old Marine son Joe Jr. leave Marilyn's funeral. Her second husband and, as a baseball player a beloved star in his own right, DiMaggio seized command of all arrangements, and all Hollywood celebrities were barred to keep the last rites private. At the end, Joe was reported to have bent over Marilyn and gently kissed her.

CONTINUED 25

REMEMBER MARILYN

At the age of 19, in 1945, Marilyn Monroe sat on a Hollywood highway for a publicity picture (*above*). She already had the look of a girl made to be remembered. Her face and body seemed gilded by the sun. She gave warm life even to the cold coils of film. Later, when Marilyn became the reigning symbol of sex (*right*), there remained about her an air of decency and almost childlike innocence.

Her death has diminished the loveliness of the world in which we live. Her life was filled with sadness—a bleak childhood, three unhappy marriages, her inability to have children. But for all her seeking, trying, hoping, never finding, she has left us many beautiful images to remember her by.

CONTINUED

July 1950

July 1962

CONTINUED

Hope, Hope, Hope" was what Marilyn wrote on the back of this picture of herself and Arthur Miller, taken at his farm in Connecticut after their wedding in 1956.

Marilyn said that it was icy cold when she sang *Do It Again* for the U.S. troops in Korea. But she recalled only the warmth she felt in their response and her joy in it.

Marilyn often saw her second husband, Joe DiMaggio, after her divorce from Miller in 1961. Of all the men in Marilyn's life, DiMaggio remained the closest to her.

CONTINUED

SHE MIMICKED FABLED SIRENS

As Lillian Russell

Marilyn as Marilyn

LIFE invited Marilyn to re-create four fabled actresses for its Entertainment Issue (LIFE International, Feb. 2, 1959). The result is reprinted here as a reminder of her great ability as a mimic. She read biographies of each star, studied old pictures. When Photographer Richard Avedon asked her to rest her leg on a handlebar for the picture above, she refused, saying, "Miss Russell just *wouldn't* have done that." But for her self-portrait at the left she made no fuss at all.

As Theda Bara

As Marlene Dietrich

As Jean Harlow

CONTINUED

All the wanting and wistfulness that saddened Marilyn's latter days pervade this recent photograph, but the world will best remember her smiles.

A Sarong takes shape in Manchester

PRO. 184T

Sunrise in Java: on a river bank a group of chattering girls are drying cotton cloth, freshly printed in the brilliant colours favoured for sarongs. As the sun travels west, bringing a new day, printers and dyers of textiles in countless countries go to work: the bazaar craftsmen of Bombay, Bokhara and Cairo, the men who mind the intricate machinery of textile factories in Pekin, Vienna and Lyons. And in an I.C.I. laboratory in Manchester, England, the day begins for the group of scientists who have provided the colour for sarongs and French couture fabrics alike —the inventors of 'Procion' dyestuffs.

Brilliant yet fast, economical and easy to use, the 'Procion' dyes were the first in the world to combine chemically with the fibres of cotton and linen. In the six years since they were invented, technical service specialists from I.C.I. have travelled millions of miles to explain their use and to give technical demonstrations lasting anything from three hours to three months. In every country in Europe, and in more than 30 others, they have established the 'Procion' dyes as leaders in their field. With the 'Procinyl' fibre-reactive dyes for nylon, they represent yet another triumph for I.C.I. research and a landmark in the history of colour chemistry.

The influence of I.C.I. research and production is felt today in every corner of the globe

Imperial Chemical Industries Ltd., London, England

ICI

Cutting the Waves

for a Classic Cup

On the rolling waters off northeast America this summer a small band of dedicated men are pitting their years of experience, their inborn seamanship and their stubborn wills against each other in the world's greatest yachting competition. Of all sporting fixtures the America's Cup is the oldest and one of the most glamorous. Since 1851, kings and queens have been absorbed by it. Cabinet members have competed for it. Presidents have watched the struggles for it. Millionaires have spent millions on it. The cup itself, so named because it was won by the U.S. yacht *America* in a race against 14 other yachts off the Isle of Wight 111 years ago, is an ugly silver trophy about two feet high. It stands in the New York Yacht Club, which has kept possession of it despite 17 challenges from England and Canada.

Now a new challenge has come from Australia, where the wealthy businessman-sportsman Sir Frank Packer has headed a syndicate to build a new 12-meter racing yacht named *Gretel* (LIFE International, July 30). With *Gretel* just arrived in the U.S. and fitting out for the big test in mid-September, four American would-be defenders

The Salty Struggle by Four

With port rail almost buried after tacking,* Weatherly *has one man checking jib trim while others keep weight to starboard.

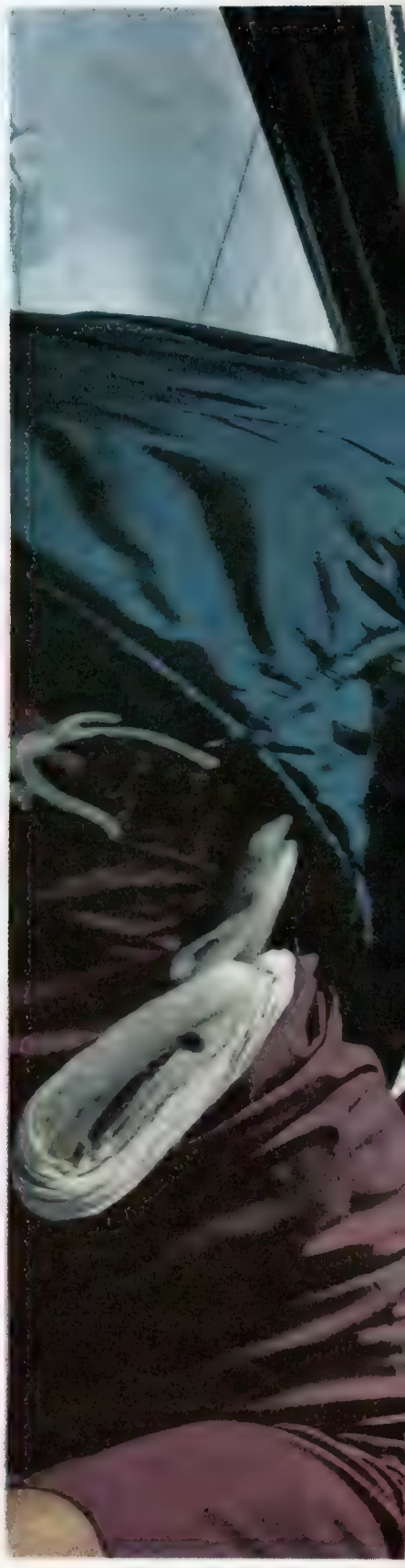
are fighting it out for the selection as the boat to race against the Aussies in defense of the cup.

LIFE Photographer George Silk, sailing on each of the four U.S. contenders, captured the tension of tactics and crew against the classic backgrounds of flying spray and thundering sail. Lashing himself far out on the bow of *Easterner*, he got repeated dunkings as he took an extraordinary picture of the 12-meter cutting through the water (*preceding pages*). Climbing down into the bare depths of *Columbia*'s hull, he caught the frenzied activity of the sail sorter who must have every sail ready and stuffed in the bag exactly right for instantaneous use when called for. Silk fashioned his own bosun's chair and prevailed on *Nefertiti*'s crew to hoist him to the top of her 92-foot-high mast, where he teetered and swung during a downwind run, his legs locked around a spar as he took pictures for more than half an hour. With Silk's pictures, the most outstanding ever made of "big boat" sailing, LIFE also presents (*pp. 50–54*) an article on the tireless effort and the dramatic duels behind the American defense of the world's most coveted yachting prize.

Boats to Defend a Trophy

Jockeying for position in tune-up race, Columbia *claws to windward in lee of trial horse,* Nyala, *getting dose of "bad air."*

Teamwork with Canvas and Coffee Grinder



Below decks in Columbia's *hold Crewman Jim Haslam* (left) *performs the vital chore of sorting jibs and spinnakers that have already been used, to have them ready for quick hoisting later.*

In midst of tacking two men operate Columbia's *"coffee grinder," a manual winch used for trimming sail. It is delicate task requiring precise timing. At right a "tailer" waits to secure line.*

Lying up to windward on deck, Columbia's *crew reduces wind resistance and keeps boat at best sailing angle. They are working out bugs in competition against* Nyala, *in background.*

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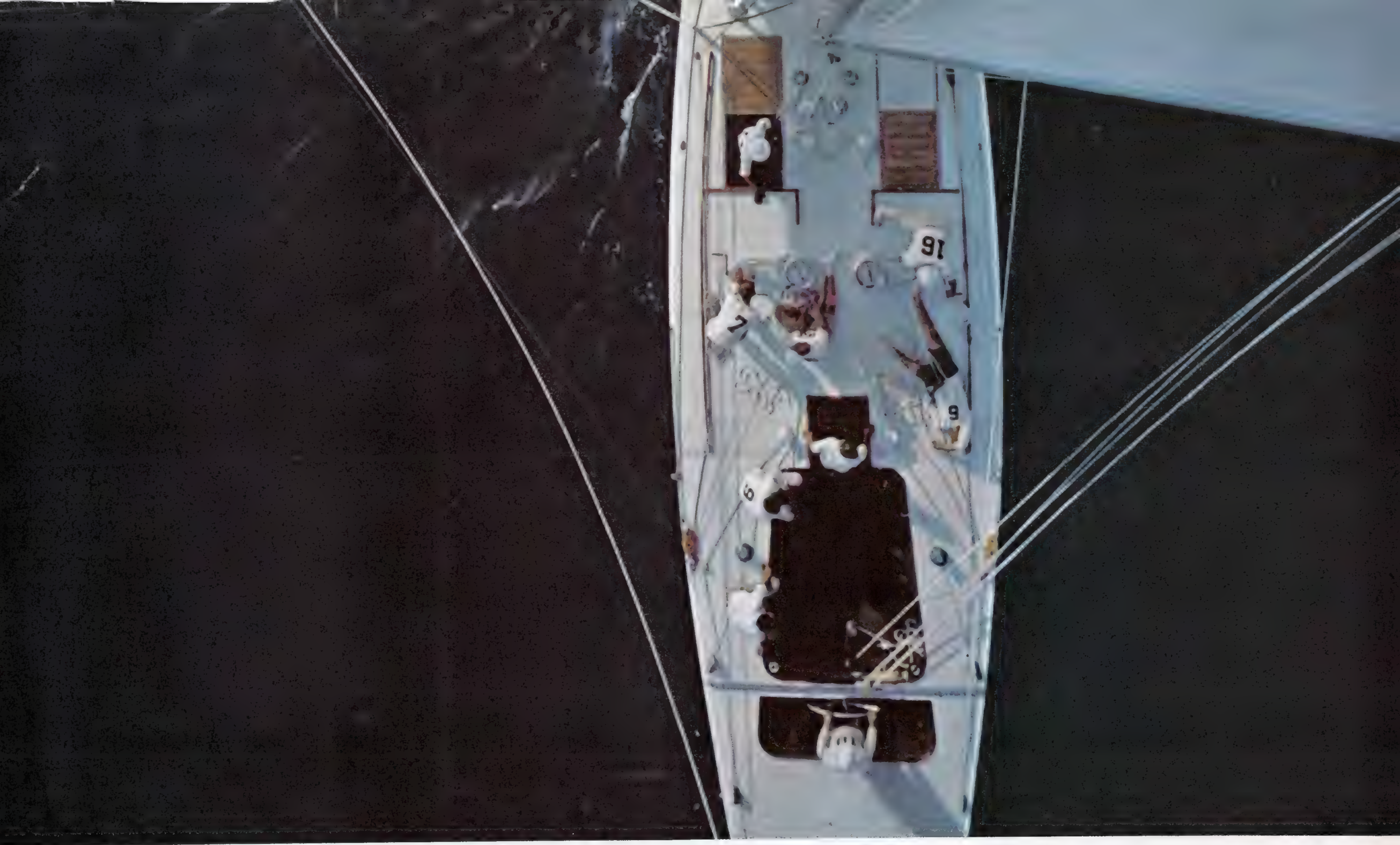

The Spinnaker Spectacle from the Top of a Mast

A huge red-topped spinnaker bellies out from Nefertiti*'s towering mast in light air. Far below Co-Skipper Don McNamara tends helm in cockpit while numbered crewmen perform tasks. No. 6 is lying on deck for better view of spinnaker's leading edge, so he can check trim. Red top of spinnaker is easier on his eyes and in light air attracts heat, helping fill sail.*

CONTINUED

17

Handling spinnakers, those huge expanses of multicolored nylon which balloon out in front of boats running before the wind, is a job for specialists. They are called foredeck bosses and Vic Romagna of Port Washington, N.Y. is one of the most famous.

On the foredeck of Weatherly *at far left Vic Romagna is almost enveloped in 3,500 square feet of sail as he jibes in light air. In this maneuver the spinnaker is changed from one side to another to make best use of wind. At his feet the spinnaker pole is being swung around. In the picture at bottom Romagna is completing the maneuver by snapping wire guy into a fitting at the end of the pole. One slip results in a hopelessly snarled mess of spinnaker.*

At top Palmer Sparkman, a Columbia *foredeck crewman, is framed by a bulging spinnaker as he prepares to perform jibe.*

CONTINUED

Sail Setting and Norwegian Steam

Silhouetted against the sail, Weatherly*'s spinnaker man (far left) jibes the spinnaker in light air as it swings down dangerously close to the water. At left, on the foredeck of* Nefertiti*, a crew member reaches for a line. Above, on the coffee-grinder, Ross Anderson, son of* Nefertiti*'s backer, employs "Norwegian steam"—i.e., stout arms. In the old days of America's Cup competition, most paid hands were Norwegian.*

CONTINUED

Her hull hidden by a huge swell, her mainsail bisecting her spinnaker, Nefertiti *moves through the Atlantic. Her sails get everything that the light wind offers as she travels before it on the leg that—after a day's trial—will take her once again into home port.*

REMEMBER PARIS THROUGH A GLASS OF Dubonnet

Paris is never far away, while Dubonnet is near.
Close your eyes and sit once again at a sidewalk cafe table in front of the "Arc de Triomphe",
sipping your favourite aperitif, Dubonnet.
The most exciting drink,
in the most exhilarating city in the world.
Dubonnet is a true Parisien,
chic, sophisticated, debonair.

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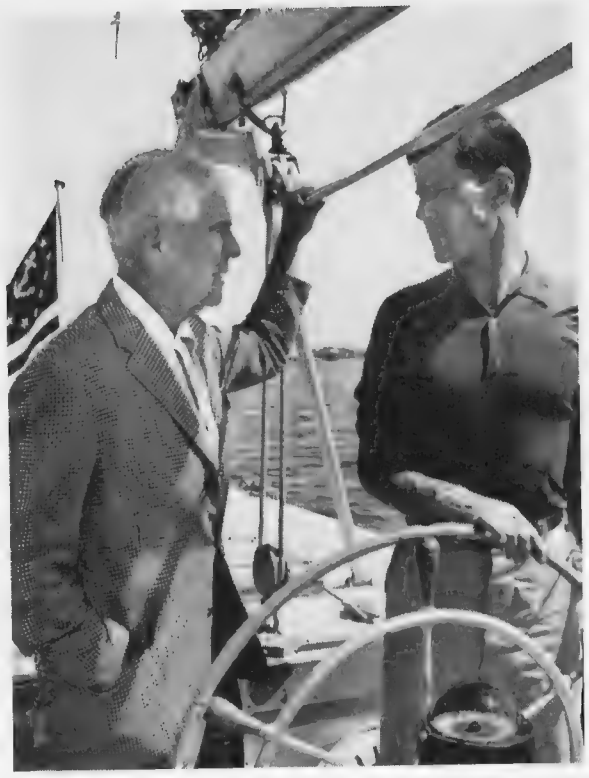
The Tough Tests for the Big One

FOR ASSESSMENT OF THE DEFENDERS, TURN PAGE



As the America's Cup contenders began their summer of tryouts, the favorite was 1958 winner, Columbia, *whose fortunes rest with Cornelius Shields and his son Cornelius Jr. They took her out for the first observation races: at right* Columbia vs. Nefertiti, *in foreground and on previous page;* Easterner vs. Weatherly, *in distance. Final trials started in August; cup races against* Gretel *are scheduled to begin Sept. 15.*

Sea Dog Eat Sea Dog

by MAITLAND A. EDEY

When news of an impending challenge for the America's Cup begins to get around, an air of heightened alertness and activity permeates eastern U.S. "big-boat" circles. In small groups, men begin to meet and whisper together. These are the beginnings of syndicates, and out of them eventually come commitments to build and race defenders. Sometimes several boats are built, which necessitates a summer of trials to pick the best of the American candidates to race against the challenger. Three such boats were built in 1958 and they are on hand again this summer, along with a new and controversial competitor, *Nefertiti.*

For a yacht designer a commission to produce a cup defender is the ultimate accolade. Such jobs are necessarily few and far between, and over the years only the best American yacht designers have been honored with assignments. But the commissions also carry with them extreme professional hazards; for yacht design, unlike almost any other engineering profession, is not an exact science.

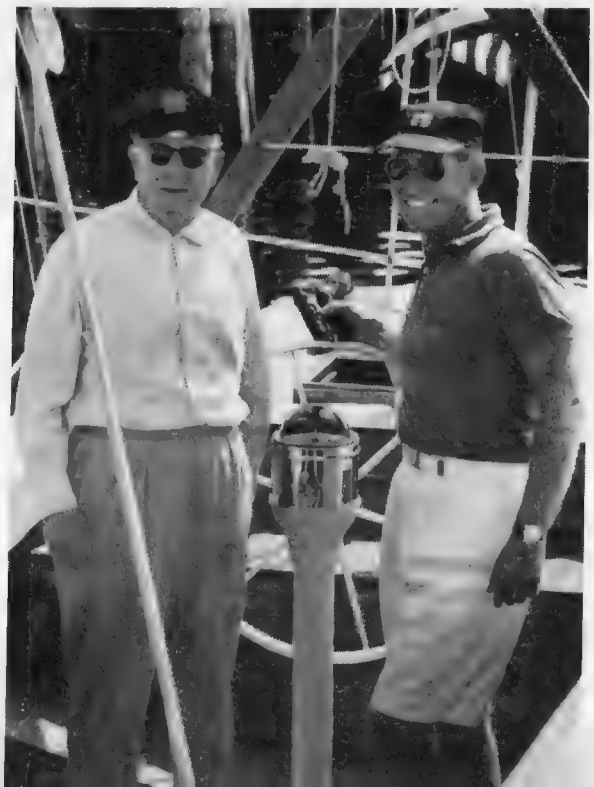
Naval architects know what water is like, how winds blow and waves dash. They know the properties of wood, and they have had several thousand years in which to determine which of variously shaped wooden objects will move fastest through water when driven by wind. Yet yacht design is still touched by mystery. Even today, with a formula for everything from skin friction to prismatic coefficients at his fingertips, a yacht designer with a degree from M.I.T. and the happy conviction that he is a scientist working in an orderly world can get some horrible shocks. Any yacht from his drawing board may unaccountably turn out to be, in the scornful word of the yachtsman, a "clunker."

A clunker may look nice on paper. It may even look nice sitting on the water. But once in motion it handles sluggishly, moving with great fuss and bother. One reason clunkers continue to show up is that the hull of a racing yacht is such a complex blend of subtle curves that their possible combinations have not been nearly exhausted by designers. The curves keep changing from bow to stern and from the deck down to the keel. This means that, as a boat is tipped a little, it presents a different shape to the water from that when it sits bolt upright—and it steers differently. Tip it a bit more, and its underwater shape changes again. It is easy enough to design a hull that will slide smoothly along in a single attitude. For a multitude of attitudes the problem becomes far more complicated.

In addition the designer must consider what kind of rig his boat will have and the nature of the competition it will probably meet. He must also worry about where his boat will be sailed. Certain shapes go better in smooth water; others, better in rough water. In light wind a long, narrow hull will perform better than a fat one. In strong winds the reverse may be true. Consider, too, the heavy penalty for small errors: if a 12-meter is faster than another by as little as one second over a mile, she will be more than 100 feet ahead of her rival at the end of a 10-mile race.

So, when a man sits down to design a cup defender, he is faced right off with a number of difficult compromises, and it is in trying to juggle those compromises to best advantage that he can get into trouble. He is provoked too by the knowledge that very fast boats are already in existence. Somehow he must improve on their proportions in order to come up with something just a little faster. Unfortunately for him, the existing boats have themselves been refined through many years of trial and error. Their proportions are subtly related; and juggling those relationships may result in a lowering of hull speed.

Will he, then, merely try to duplicate an existing successful boat and depend on the men who sail it to bring it home a winner? Almost certainly not. Yacht designers tend to be distrustful of skippers, whom they often regard as heavy-handed, unobservant, knot-headed bundles of violent emotion. Too often they have sat in observation boats, tearing their hair and watching their beautiful creations being throttled by inept helmsmen and crews. (From the skipper's point of view, of course, the plaint is: "Why won't this damned plug go faster? I give it the benefit of all my skill and here it sits like a mud turtle.")



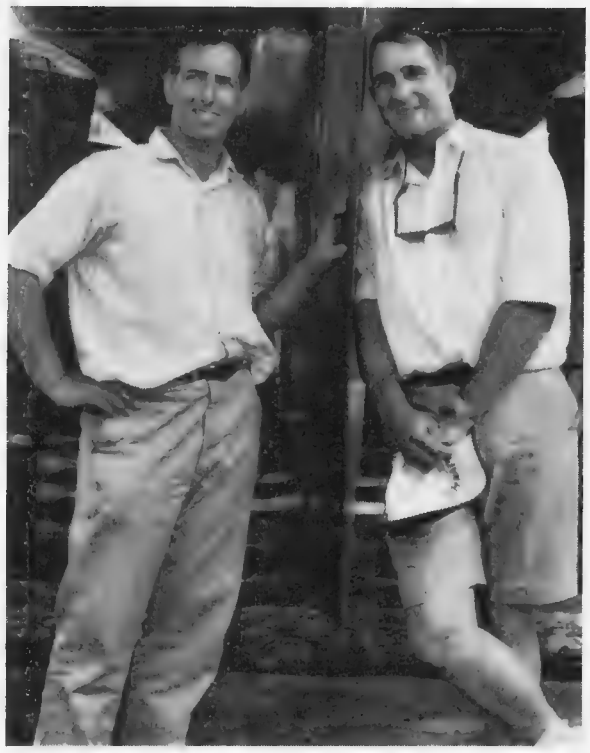
Best big-boat skipper in the U.S., Emil Mosbacher Jr. will sail Weatherly. *He is at helm with Henry Mercer* (left), *who heads the syndicate that owns* Weatherly. *In 1958 Mosbacher skippered 19-year-old* Vim *and his great skill forced faster* Columbia *to go all out to win.*

'One designs,' 'rating' and the '12-meter rule'

Most important, however, the designer is an artist at heart and an explorer. His head is full of magnificent and daring plans which he would execute tomorrow if he could only find clients rash enough to finance them. Therefore, when he does get a chance to experiment, the temptation is to strike out in a new direction in the hope of stumbling over one of those rare but dramatic breakthroughs in design which occasionally electrify yachting, and which make their discoverers famous. There are, however, two strong deterrents to such trail blazing.

One is the likelihood of clunkerism. The other—for boats like the Twelves—is something called the 12-meter rule, or formula.

To understand the place of formulas in yacht design it may help to know that there are three basic kinds of sail-



Ted Hood (left) *and Don McNamara are co-skippers of the only new U.S. contender,* Nefertiti, *which in her first test* (center picture) *beat out* Columbia. *Hood is designer of* Nefertiti, *whose unorthodox hull has been the subject of much nautical controversy. If* Nefertiti *does well this summer, she will not only earn the right to defend the cup but may also revolutionize 12-meter design.*

for the America's Cup

boats built for racing today. The vast majority are small boats, in so-called "one-design" classes, like Snipes, Bluejays, Stars and literally hundreds of others. Every boat in a class is built to the same set of blueprints and is supposedly the same as every other boat in the class. This ensures relatively inexpensive construction and puts the emphasis on helmsmanship rather than on design, since all participants in a race theoretically start off even.

A second major category includes larger boats which are used both for cruising and for racing. Here the requirements and tastes of an individual come into play. The size of his family and the kind of cruising he will do dictate a tailor-made approach. As a result nearly all cruising-racing yachts are different. For such boats to race together a system of handicapping has been worked out, based on size of hull, depth of keel, sail area and innumerable other dimensions. Under the handicapping rule for cruising yachts there are virtually no restrictions; it is possible to design almost any version of such a boat and still get a "rating" for it. The art comes in producing one that is fast, roomy, seaworthy, and still "rates" low. This consideration tends to put a strong premium on design.

The third category, into which the Twelves fall, tends to encourage seamanship and design about equally. This is accomplished by means of the 12-meter rule, which limits many of the dimensions a Twelve shall have, but still allows some leeway. It says, in effect, you can make your hull a little longer and more powerful, but you must give up some sail area if you do; you can make it narrow and sleek up to a certain point, but no farther; your keel can be any shape, as long as it is not more than nine feet deep; and so on. To a designer confronted with this formula, it is as if he holds in his hand a large ball of putty of a certain weight. He can squeeze it any way he wants, but it is still the same ball.

The restrictions in the 12-meter rule have tended to force the design of a certain kind of boat. What makes this summer's trials so alluring to yachtsmen is that the one new boat on hand has gone beyond the conventional approaches to the formula. Her three competitors, all veterans of the trials of 1958, are very much alike. So is the Australian challenger. But the new one, *Nefertiti*, is different. And if she represents a breakthrough in design, the Twelves will never be the same again.

The tank, valued tool in a changing craft

The modern, high-performance 12-meter boat came of age in 1939, before the Twelves aspired to America's Cup competition. That year a young designer named Olin Stephens was commissioned to build one for Harold Vanderbilt. In designing the new boat, *Vim*, Stephens incorporated some novel hull features he had discovered a couple of years before while working on *Ranger*, the last and greatest of the J-boats.

Today Stephens is generally considered to be the best yacht designer in the world, but at that time he was youthful, relatively obscure and enormously gifted but about as communicative as a horseshoe crab. He came along at a time when yacht design was passing out of the old fly-by-the-seat-of-your-pants days and just entering a period of science and mathematical analysis. A testing tank, a long trough through which model ships and boats could be towed and measured by delicate instruments for hull efficiency, had been installed in 1934 at the Stevens Institute of Technology in Hoboken, New Jersey. Olin Stephens was one of the first to use the tank as a serious tool in the design of yachts. It paid off for *Ranger* and *Vim*, both of which were superb performers. In two decades of racing *Vim* was seldom beaten. Her older competitorswere less able than she, and there were no newer ones; for nearly 20 years not another Twelve was built.

Then in 1957 came the dramatic announcement that, because of the J-boats' expense, thereafter the America's Cup races would be held among Twelves. The following summer three spanking new boats appeared to fight it out for the privilege of defending the cup. One of these was designed by Stephens.

This in itself was enough to make his competitors chary. Since designing *Vim*, Stephens had "been in the tank" scores, if not hundreds, of times, and he had come to know more about hull formulas and tank-test procedures than any man alive. Tank testing is itself rather mysterious. Not only must a designer learn how to evaluate results, but he must learn how to make allowances for deficiencies in tank procedure, and, of course, know what design to put into the tank in the first place. He can test slow hulls until the scows come home, but all he will have learned is some things *not* to do. The great art is in getting a good hull into the tank to begin with, and then in having the know-how to make the small modifications that may improve it. If a man had all the time and money in the world, he could float model after model indefinitely and come up with a good one by trial and error. But tank tests are elaborate procedures and cost a minimum of $1,500 a crack. Also yachts must be built by their designers and sailed by their crews, not merely thought about.

Furthermore, Stephens had already designed *Vim*, the fastest Twelve in the world. There was no certainty that another designer could even equal *Vim*, let alone surpass her. Naturally

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Chandler Hovey, the 82-year-old dean of U.S. yachtsmen, contributes his experience to Easterner. *Skipper George O'Day* (at wheel) *was awarded gold medal for 5.5-meter sailing in 1960 Olympics. Improved crew this year should help* Easterner *make better showing than she did in trials four years ago.*

she had been studied, but those studies were necessarily superficial. Her blueprints were locked in Stephens' office, so that nobody else knew what her exact dimensions were. Stephens, of course, would not divulge them and the tank-test people never give out information on other people's boats.

So it was a forgone conclusion to competing designers that they would have to design something at least as good as *Vim*; it was odds on that a new Stephens Twelve would be even better. In the face of this challenge they did remarkably well. Philip Rhodes designed *Weatherly*, a yacht of exquisite beauty closely resembling *Vim*. Raymond Hunt produced *Easterner*, a handsome craft whose mahogany hull was slightly heavier than that of the others. And Olin Stephens himself came up with *Columbia*.

As it turned out, during the 1958 Newport trials *Columbia* did have a slight edge over the other two new boats. But it was *Vim*, her 19-year-old sister, she finally had to beat. *Columbia* did it by a matter of seconds in the last race of an entire summer's hot competition. American 12-meter design was apparently close to a limit of perfection.

The cup races themselves, in September against the British challenger *Sceptre*, were embarrassingly one-sided. *Sceptre* was a bona fide clunker. She lost in four straight races, two of them by a mile or more.

In the years since, a great deal of thought has gone into the performance of the American contenders built in 1958, particularly since all three are now being groomed for another cup defense. Should *Columbia* automatically take it again? Not necessarily. There are at least three reasons why she might not win the privilege of defending a second time. First, the hulls of the other boats have been changed somewhat to make them faster. The other two reasons have nothing to do with hull design at all. They depend on sails and on crews; both are, in the opinion of the men who design and sail the 12-meters, at least as important as hull shape—perhaps more so.

Sails provide the driving force, the engine, of a yacht. Their cut is important, so is their selection—full ones for light winds, flat ones for strong winds. The right sails on the wrong hull will do better than the other way around. But neither hull nor sails are enough to make up for poor handling.

There is no question that in 1958 *Vim* was the best sailed Twelve. Her crew was as smooth as silk, her helmsmanship impeccable—divided between a young shipping man, Don Matthews, and a young oil executive, Emil Mosbacher Jr., the latter perhaps the best all-around sailor in North America. *Vim* got the best starts and made the fewest mistakes; the men aboard her had been sailing in her for years and knew her every mood intimately. What beat her in the end was the raw power of *Columbia*. The boats were almost dead even in light air, but when the wind began to rise *Columbia* would inch away. Through his tank tests Stephens had made *Columbia* a little fuller aft than her slender sister and in a breeze the modification paid off.

Weatherly, in retrospect, suffered from a weight problem. In designing racing boats every ounce of weight above the waterline must be shaved to a minimum so that as much as possible can be concentrated in the keel. Good weight distribution makes a boat "stiff." Such a boat stands up well in a strong wind and can carry plenty of sail for driving power yet not heel too far over. Excessive heeling slows up a boat drastically. Although *Weatherly*'s designer, Philip Rhodes, went to considerable lengths to conserve weight on deck and aloft, he did not go to the extremes that Stephens did. As a consequence, *Weatherly* was "tender"; she heeled too easily. Even today Rhodes admits to embarrassment at the photographs taken during the 1958 trials which show *Weatherly* over on her ear, and all the members of the crew dangling over the side in an effort to hold her up. But in light air and in spinnaker runs before the wind, *Weatherly* was a phantom.

The varied handicaps of enigmatic 'Easterner'

Then, as now, *Easterner* was an enigma, testifying to the importance of handling and management as ingredients in successful racing. Owned and manned by the Chandler Hovey family of Boston, she was late getting into commission in 1958. Much of her gear was untested. Not enough time was spent analyzing her sails to see which were best under which wind conditions. And many of her berths were filled by Hoveys themselves rather than by the muscular, competition-scarred veterans who worked the other boats. Such emphasis on a strictly amateur approach to big-time yachting harked back to an earlier, more relaxed period during which Chandler Hovey Sr. was a leading figure in American big-boat racing. But it did not help *Easterner*'s chances. She did, however, show impressive bursts of speed. The trouble was that her owners never quite knew why, so the basic facts about her potential were still unknown when she was eliminated from the 1958 trials. Some Boston experts still think (as Boston experts are prone to think about Boston boats) that if *Easterner* had been campaigned as hard as the others, she might have proved to be the best of the lot.

Credence was given to this view by the events of last summer. When it became known that an Australian challenge for the America's Cup was to come in 1962, *Columbia*, *Weatherly* and *Easterner* were put back in commission and spent the summer racing against each other informally. The results were most surprising. *Easterner*, the dud of the previous cup trials, was turned over to Mosbacher, the wizard skipper. She beat both *Columbia* and *Weatherly* on several occasions—the first races the boat had ever won.

Columbia meanwhile has changed hands. She was bought by the Shields brothers, New York investment bankers, and is now being sailed by a third Shields, Cornelius Jr. Known also as "Glit," young Shields had been a hot sailor in one-design classes for a number of years but last summer was his first at the helm of a Twelve. He wisely spent it learning as many things as he could about the personality and potential of his new charge. This does not always make for the best racing record, but it is good insurance for the future. In any event, *Columbia* was not the standout she had been in 1958. Instead it was *Weatherly*. Reveling in the light air of a Long Island Sound summer and responding to the fingertip touch of Stockbroker Arthur Knapp Jr., who had sailed her during the cup trials, she ran away with more than her share of races.

Now the three are back in the water racing against each other and the new 12-meter *Nefertiti*. *Easterner* again is

Close call for Columbia *came during the first trials when her aluminum mast snapped in 25-knot winds. Two men went overboard, but none was injured. One was rescued by Challenger* Gretel*'s scouts, watching the trials from a cruiser.*

Embarrassment for Nefertiti (left) *came when wind snatched her huge balloon spinnaker out of the bag as it was being hoisted. The sail dragged like a sea anchor until the crew hauled it aboard.* Nefertiti *still beat* Columbia.

in the hands of the Hoveys. Her designer, Ray Hunt, is aboard; so is a crack helmsman from Boston named George O'Day. Even so, *Easterner* lost more races than her competitors in the first series.

The *Weatherly* story has much better promise. Heroic measures have been taken to improve her weight ratio. She has a new keel of a more efficient, tank-tested shape. Everything removable or shavable has been removed or shaved. Rhodes has even gone to the extreme of cutting two feet from *Weatherly*'s stern. She may not look quite so pretty as she once did, but she is nearly a ton lighter above the water line. Most of this weight has been relocated deep down where it can exert considerable leverage in keeping *Weatherly* upright in a strong breeze. She has proved to be stiff as a church and faster than ever.

Even more important, perhaps, is the fact that Emil Mosbacher now skippers *Weatherly*. A 12-meter usually is manned by 10 to 12 men, and in a crew that size there must be an acknowledged leader. Mosbacher, in addition to being a superlative tactician and helmsman, has rare qualities of leadership. His name is magic among the manpower pool of broad-backed amateurs who make a semiprofession of sail handling on big yachts and he has assembled at least as good a crew as any of the other boats. This is an immense asset, since sloppy handling of a sail may cost precious seconds which the best strategy or helmsmanship can never make up. As an indication of Mosbacher's stature, it is significant that a muscular businessman named Vic Romagna, the acknowledged dean of spinnaker men (*pp. 42, 43*), is aboard *Weatherly* this summer. *Weatherly* has showed herself the boat to beat in observation trials.

Columbia, despite her preeminence in 1958, has not been left untouched either. Olin Stephens has been back in the tank once again and has come up with a sharper-edged keel. Deck gear and winches have been simplified and lightened. Too, a stiffer mast has been stepped, for the slightest sway in a mast may degrade the set of a sail. On paper *Columbia* has given every promise of being faster than ever this year.

The big question mark here, however, has been the crew. Glit Shields, the new skipper, could still turn out to be the finest helmsman of them all, but right now he lacks big-boat experience. He does, however, have access to it.

Glit's father, "Corny" Shields, is one of the all-time greats of American yacht racing, one of the wiliest, most resourceful and most relentless competitors the sport has ever known. He has sailed dinghies, cup defenders and pretty nearly everything in between. Nothing remotely pertaining to racing escapes his attention. On Long Island Sound he will even inspect the rigging of his boat when he comes aboard in the morning in search of morning dew and spider webs, on the theory that spiders are more likely to spin webs in a southwest wind—and he selects sail accordingly.

In the first series of trial races, *Columbia* has not done so well, but the Shieldses should not be counted out yet.

The gamble on the 'fat' one

As for the newcomer, *Nefertiti*, she is a radical departure from the traditional 12-meter because she is fat. A fat boat means an increase in underwater hull surface, or "wetted surface." The more wetted surface, the more friction with the water and the less speed. Knowing this, designers normally strive to keep their wetted surface down by keeping the hulls narrow. Theoretically the largest smoothest-moving volume for a given surface area—in other words, the most boat for the least wetted surface—is a long, slender cylinder. However, a keel must be hung from the cylinder not only for stability but also to enable the boat to sail to windward. The refinements in design come with the tapering of the cylinder at bow and stern, in the shape of keel and rudder, and in the curving of keel into hull. The final results, in cross section, shape up like a wineglass, the keel hanging below like the stem.

In pondering this shape it does not take much imagination to realize that if the wineglass were made narrower, the wetted surface of the yacht would be reduced. Therefore a narrow hull has obvious advantages. The question is simply, how narrow should it be? In recent years that question has been answered for the Twelves by a restriction in the rules: a hull may not be less than 11 feet, 10½ inches wide. Consequently all the best American Twelves have had beams of almost exactly that width.

It has taken two bold men to break away from that standard. The first is E. Ross Anderson, Boston industrialist and principal owner of *Nefertiti*, who surprisingly chose as his designer Ted Hood, a young sailmaker out of Marblehead, Massachusetts with no experience whatsoever in Twelves. Hood, in fact, had previously designed exactly five boats. But these boats, all of them fat cruiser-racers, were phenomenally successful. Built to extract the maximum advantage from the cruising-racing formula, they won race after race. Anderson reasoned that if Hood could squeeze as much juice as he had out of one formula, he might be able to do the same with another.

Hood started out by boldly deciding that his hull would be a foot and a half wider than usual. Why all that extra weight, extra beam, extra wetted surface? The idea seemed ridiculous, but it was rooted in Hood's being a sailmaker and not primarily a yacht designer. To him sails are all-important; a hull is merely something to support them. He reasoned that where other designers were compromising with sails to get a good hull, he would compromise with the hull to get the best sails.

This radical approach immediately dictated a wider boat. A modern sloop rig with its large overlapping Genoa jib derives its power from the "slot" between jib and mainsail (*see diagram, p. 54*). The larger and deeper the jib, the greater will be the driving force generated by the wind pouring through the slot, particularly when the boat is sailing close to the wind. But as the Genoa jib gets bigger, the hull of a slender boat begins to get too narrow to permit the best relationship between jib and mainsail. Equally important, if the Genoa is large and the mainsail small, the boat under 12-meter rules will be allowed to carry more sail.

Ted Hood got out his slide rule and went to work. Soon he had two hull models which he took down to the test tank in Hoboken. One was rather quickly discarded, but the other had great possibilities and was subjected to 26 different modifications and retests before a final shape was agreed on. Hood said later that he would have liked to continue trying out still more ideas, but time was getting perilously short and the boat had to be started. By any sensible standard he already was too late. It normally takes the better part of two years to complete the endless detail work involved first in designing a Twelve and then actually building her. Hood had eight months. It took him five to complete his designs. That left the all but hopelessly short time of three months for construction. But by a night-and-day effort on the part of designer, syndicate and builder Selman Graves, *Nefertiti* slid into the water exactly 96 days after her keel was laid down.

She had a very wide stern, which meant that most of her width was carried unusually far aft in her hull, indicating great stability and power in strong winds. Most noticeable, however, was her oversize jib, made possible by stepping her mast farther aft than in other Twelves. These things all fitted together. A wider hull permitted good trim for a large jib. Moving the mast three feet aft provided space for such a jib.

'A case of maximum keel, minimum hull'

What does not show from outside is *Nefertiti*'s construction. She is nearly a ton lighter than *Columbia* and a couple of tons lighter than *Easterner*. *Columbia*, which looked so spare and spartan alongside *Weatherly*, is positively plushy compared to *Nefertiti*. Below decks the new sloop has absolutely nothing that is not required.

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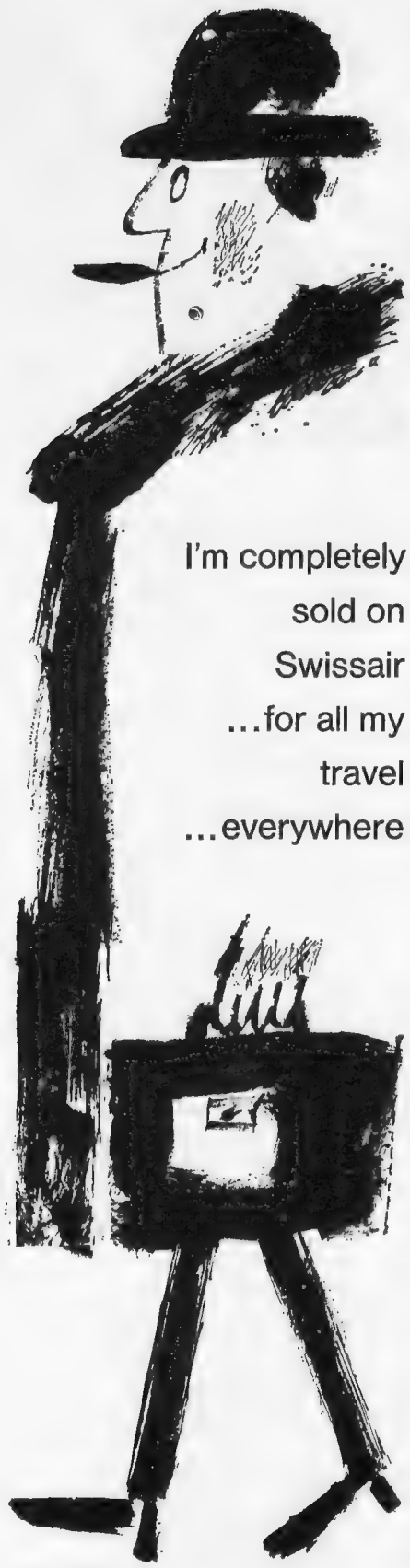

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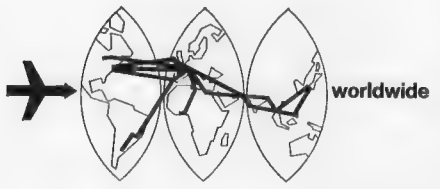


SWISSAIR

Every structural member has been honed down to within an eyelash of the law. As Hood's engineer father, Stedman (The Professor) Hood, explained it: "This boat was built as lightly as possible under the rules. It's a case of maximum keel and minimum hull."

The theoretical elements of her new design once fitted together, *Nefertiti* made good sense on paper. What remained was to see if Hood had a real race horse or just another clunker. Even the early runs soon indicated she is no clunker, and in the first series of trials *Nefertiti* won more races than any of the others.

The wizard skipper or the new girl in town?

This first series, however, did not tell the whole story. It provided each contender with an opportunity to shake out the kinks and get a taste of competition. In the series starting Aug. 15, it will be sea dog eat sea dog in a final set of battles. The boats will race daily, weather permitting, until the America's Cup selection committee makes its choice.

Will it be the old champion, the light-weather ghost with the wizard skipper, the long-shot family boat or the new girl in town? At this stage of the game it would take a rash man to pick a winner.

Meanwhile, what about *Vim*, the lady who almost defended the cup four years ago? Is she out of it this year? Directly, she is, but indirectly she is still playing a most important and interesting role. When Sir Frank Packer decided to head up a syndicate of the Royal Sydney Yacht Squadron to challenge for the cup in 1962, he moved first thing to charter *Vim*. She was shipped to Australia and there analyzed in detail. The secrets of Olin Stephens' 23-year-old hull form were at last revealed to someone other than Stephens. An exact model was made of *Vim* and used as a standard for testing new hulls. Eventually the new challenger, *Gretel*, was produced.

Big-boat experts are certain that the Australians with their designer, Alan Payne, have produced a good boat.

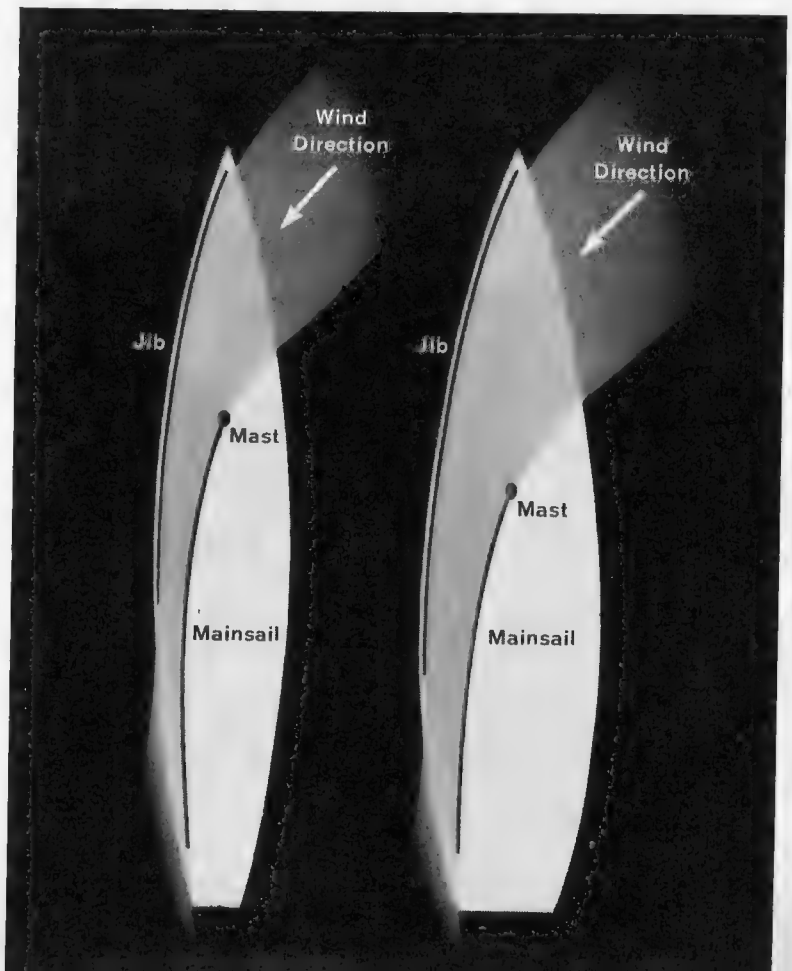
Packer assesses her frankly: "*Gretel* is stiffer than *Vim*, stronger and a bit livelier: she wants to go, you know. She is no faster downwind. Upwind it seems to depend on what headsails are selected. In strong winds she is superior to *Vim*."

Packer has been in the United States in recent weeks attending, among other things, to the renting of a hotel in Newport for the accommodation of the 27 men who make up the *Gretel* effort. Asked what he thinks of Australia's chances for lifting the cup, he replies, "We have a chance, but we are a definite underdog."

This is an entirely realistic assessment. Although some of the world's best yachtsmen are Australians, and although some of the best Australians will be working in *Gretel*, the men from Down Under have not had very wide experience in Twelves. Their tastes run more to small, one-design classes or to cruising-racing. Furthermore, they do not know the waters off Newport as the Americans do. On top of that, it will still be one Australian boat against the best of four American ones.

Sir Frank was asked the other day which of the four he thought it would be. "I hope it's *Columbia*," he replied. "I don't like to think there's anything better."

And no challenger in his right mind would.



An efficient "slot" for the wind between jib and mainsail makes a sloop go fast. A wider hull (right) *like* Nefertiti's *permits a large jib without constricting slot. On a narrow hull* (left) *the jib must be smaller else it would constrict the slot too much and interfere with air flow.*

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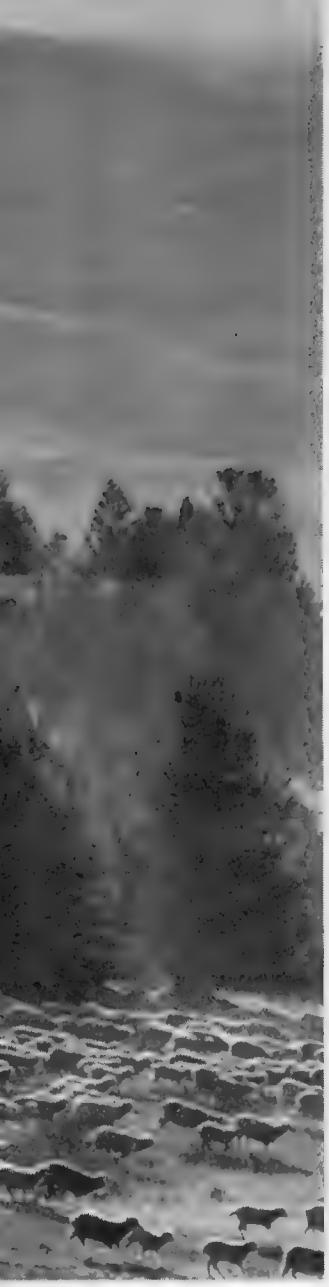
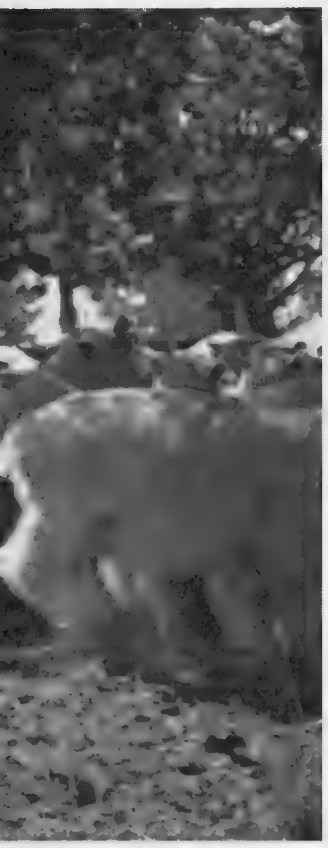
Heritage Kept Alive in the Wyoming Hills

Following the Call of the





Old Pioneers

Photographed for LIFE
by Burk Uzzle

CONTINUED

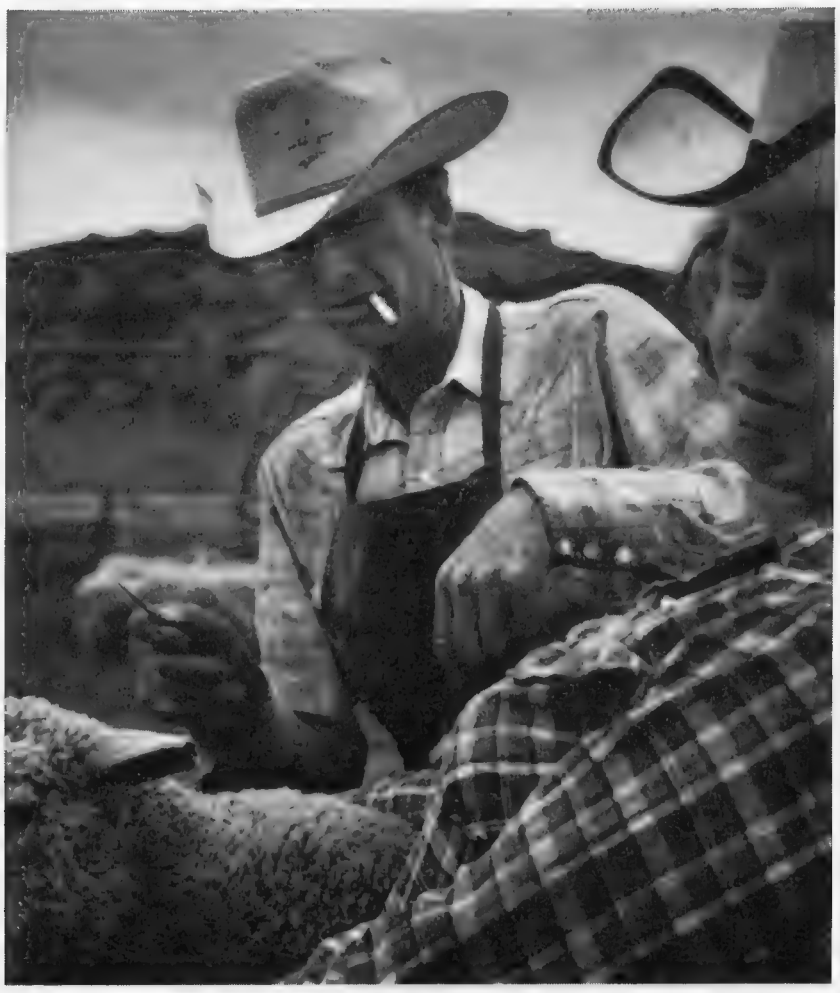
Stern Way of Self-sufficiency

Wrestling a stallion to the ground, cupping hands to weather-cured face as he hollers orders to his herd-riding children, Norris Graves is a special breed of man, the working heir of America's pioneer tradition. It is a tradition lost sight of in the remoteness of the land. But, strong and inspiring, it survives in this sinewy Wyoming rancher's everyday life—a hard, rough, stubbornly self-sufficient life which he took over from his father and is passing on now to his sons.

Graves sets his strength against 20,000 acres of rocky, sloping land at the Red Fork of the Powder River where the Big Horn Mountains rise in the west. There he grazes 1,800 sheep, 200 head of cattle and 40 horses. Norris' mother came to the valley in 1889, trundling 10 miles a day in a covered wagon. "The trip was a restless affair," says Fanny Graves, 72, meaning that they got little rest, "and Mother was all tired so we stopped here."

Now, like their grandmother before them, Norris' children—Joyce and Bonnie, 17 and 14, Kenny and Lee, 10 and 2—live in a man's world where daughters work like hired hands and little boys abandon babyhood as soon as they can work. "Life isn't meant to be easy," says Norris. "I never expected a bed of roses. I didn't get one." Strictly up-to-date, he has a $35,000 machine shop to service his machinery, and his branding irons are fired with propane gas. Yet he is a romantic, holding tenaciously to his heritage. He is the most skillful of the men in his area who know how to lasso and throw a steer or stallion. To him horses are noble transportation. When he describes a neighbor herding livestock with a truck, Norris' face splits with laughter.

Little Lee, herding sheep on the previous page, stalwartly helps his father carry out the trash. Kenny at 10 (*below*) gladly wrestles man-sized saddle alone. "The thing I like best," he says, "is riding."



In a savage tussle to tie down an unbroken stallion, Norris Graves trusses up one leg preparatory to castrating the horse to prevent it from breeding. It belongs to Kenny, who will break it himself.

As Norris marks the age of a sheep by slicing off the tip of its ear, his wife Mae steadfastly holds the animal but winces at the sight. She is the one Graves who usually sticks to women's work indoors.

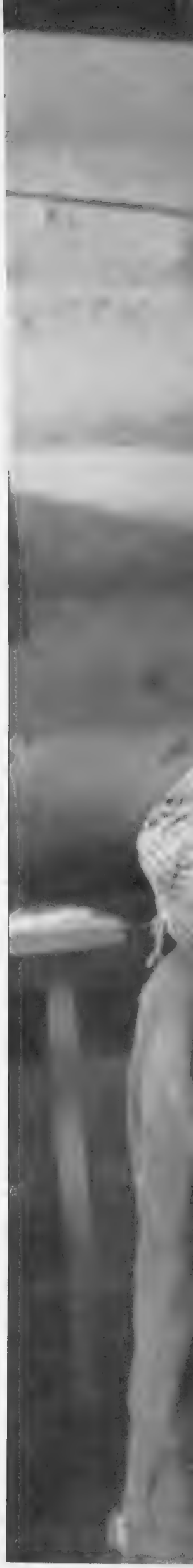
CONTINUED

Ever-present Aura of the Past

Awakened by the sun coming up like a star burst, Joyce (*left*) and Bonnie on an overnight cattle roundup take a final few moments in their sleeping bags. They chose to sleep out though it rained during the night.

Their weary faces reflecting the draining hardness of their way of life, father and son await dinner. Kenny hanging on his father for comfort. Kenny, at only 10, is already looked to as eventual boss of the ranch.

A living echo of the pioneer past, Grandmother Graves, 72, hugs Lee inside an original homestead cabin where she has lived since moving in as a newlywed 45 years ago.



CONTINUED

The Easy Pleasures of Just Being Young

After cleaning a trout Kenny and his cousin Danny admire its flesh, decide it is like an orange. Kenny caught it in his bare hands.

At a 4-H Club meeting, Joyce is fascinated by a boy from Washington, D.C. Usually bored by city kids, she says, "Their darn cars are so important. That stuff doesn't count out here."

Barely blooming,
awkwardly beautiful,
Bonnie sheds her Levis
to go swimming
in a pond backed
up behind a beaver dam.

Belly-flopping for
a sun-washed drink, Lee
in cow boots and Levis
is very much the tired
old cowhand. "He wants
to help me in everything
I do," says Norris
with pride in his voice.

CONTINUED

All that a man needs in Wyoming, Graves has: his own brawn, his sons, his tools. Here, at sundown, after a day's hard toil on an irrigation ditch, he stands proud and happy against the plains.

The bottle that made history

Championship golf–played with a bottle! And at St. Andrews!

And yet it happened, in the 1924 Amateur Championship. An eminent surgeon was playing off a tee of his own construction. He placed the ball on the end of a length of rubber tubing drawn over the neck of a bottle. The Rules of Golf Committee, though pained, took no direct action.

A great game, golf–how marvellously it blends with a great Scotch. Many golfers who play to the nineteenth hole choose Ballantine's. For Ballantine's *is* the Superb Scotch for "the perfect round."

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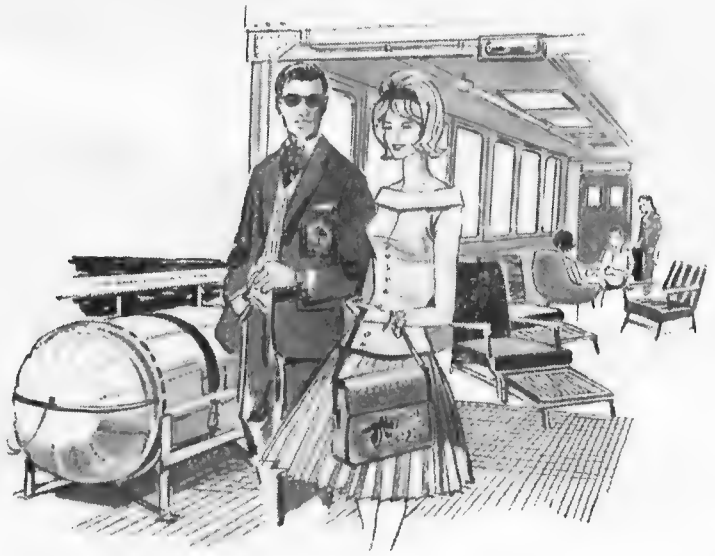
DUNLOP

IN THE QUARRY

Rubble, rock and abrasive materials are carried with effortless safety along the endless path of Dunlop conveyor belting. Dunlop hose supplies pneumatic power for drills and cutters as well as lines to carry water and fuel to or from working areas.

AT THE GOLF CLUB

Handicaps go down with Dunlop golf balls, clubs and shoes—sports equipment you can really trust to help you stay on top form. In the club house there's colourful Semtex flooring to delight your eye, Dunlopillo cushioning to raise relaxation to a new height of luxury.



ON THE SEA

Semtex Fleximer decking, studded rubber tiles and Semdec compound, constitute an economical and attractive range of deck coverings. Dunlop davit launched and hydrostatically released liferafts in sizes to hold from 4 to 20 persons, provide an extra safety margin at sea.

SYMBOL OF PROGRESS

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The range of over 500 different kinds includes natural and synthetic rubber solutions, self-vulcanising solutions, latex adhesives and rubber-based cements.

AIRCRAFT COMPONENTS
"Maxaret" anti-skid units, "Maxivac" windscreen wipers, thermal de-icing systems, pneumatic and hydraulic equipment and countless other accessories.

ANTI-CORROSION and ANTI-ABRASION SERVICES
Bonded linings and coverings, anti-corrosive cements and protective paints for storage vessels and processing plant.

BELTING
An immense range of conveyor and elevator belting, and both flat and Vee transmission belting.

DISC BRAKES
A major Dunlop contribution to safety in motoring and aviation. Now fitted to a great number of "production" motor cars.

DUNLOPILLO
The original latex foam rubber. Available as mattresses and upholstery for chairs and seating of all kinds

ENGINEERING COMPONENTS
A great variety including anti-vibration mountings and flexible transmission couplings of all types.

FLOORING
Semastic thermo-plastic tiles, Vinylex and Semflex vinyl tiles, Dunlop rubber flooring, Permatred and Surefoot—a range covering every industrial and domestic flooring need.

FOOTWEAR
20 different types of protective footwear for industry, a fine range of sports and leisure footwear, and a unique service to footwear manufacturers.

FLEXIBLE CONTAINERS
Flexible rubber-resin containers (hoppers, bins, buckets, trays, etc.) with many domestic, industrial and agricultural applications.

GENERAL RUBBER GOODS
These include rubber covered rollers, printers' blankets, rubber-proofed materials, collapsible containers, and a wide range of moulded rubber products.

HOSE and FLEXIBLE PIPES
Hose for suction and discharge of petrol and oil, steam, water, air, acids and sandblast also for high pressure use. Available in a wide range of sizes and constructions with or without end fittings.

INDUSTRIAL CLOTHING
Gloves and gauntlets, protective aprons, waterproof coats and garments.

INFLATABLE LIFERAFTS
Dunlop "Seafort" and "Seafarer" at present available in 4, 6, 8, 10, 12 and 20 man sizes. All sizes available in flexible valises or rigid glass-fibre containers.

LATEX COMPOUNDS
Dipping compounds; compounds for flooring screeds, carpet sizing, fabric combining; carpet backing compounds; reclaim dispersions.

PNEUMATIC SUSPENSIONS
Dunlop "Pneuride" for road vehicles—employs air springs with automatic pressure adjustment.

POLIMUL
—the trade name for the range of polyvinyl acetate and synthetic resin emulsions made by Dunlop. These are used in the manufacture of emulsion paints, leather finishes and adhesives, and for coating paper and conditioning textiles.

RIMS and WHEELS
Detachable car wheels of several types; wheels for commercial and industrial vehicles, agricultural tractors and implements; rims for cycles, motor cycles and scooters.

SPORTS EQUIPMENT
Golf balls and clubs; tennis balls, rackets and presses; Badminton rackets and shuttles, Squash rackets and balls, Table Tennis bats, balls and tables; footwear . . . Dunlop supplies equipment for almost every sport and game.

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Silicone rubber; Duthane oil resistant elastomer. Duotarp P.V.C. coated nylon tarpaulin material, Trakmark P.V.C. embossed sheeting, etc., etc.

TYRES
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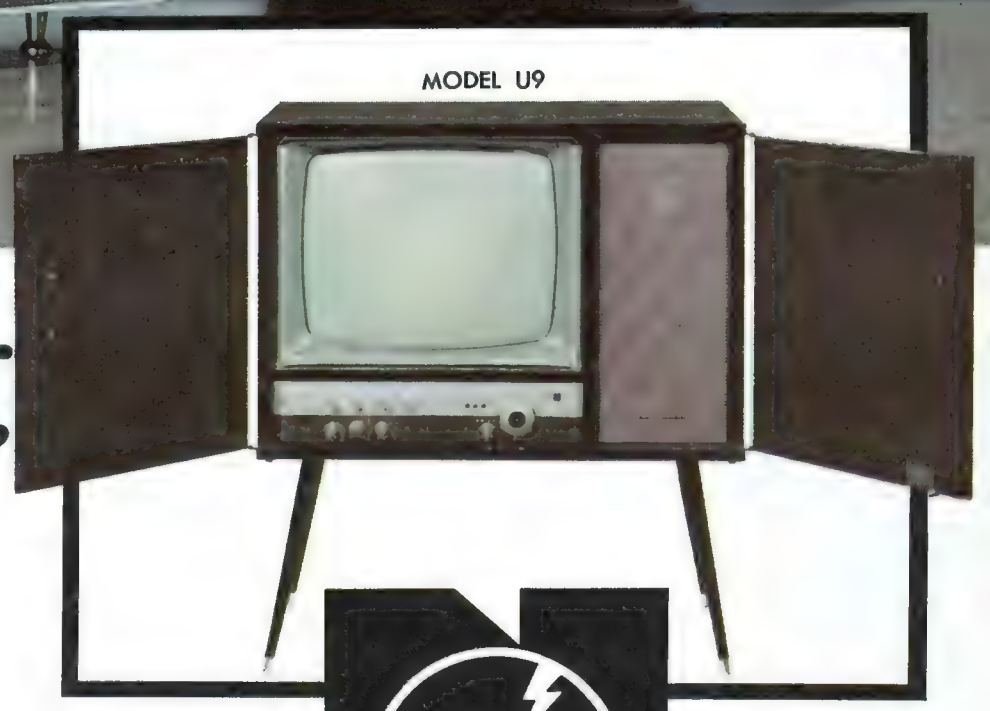

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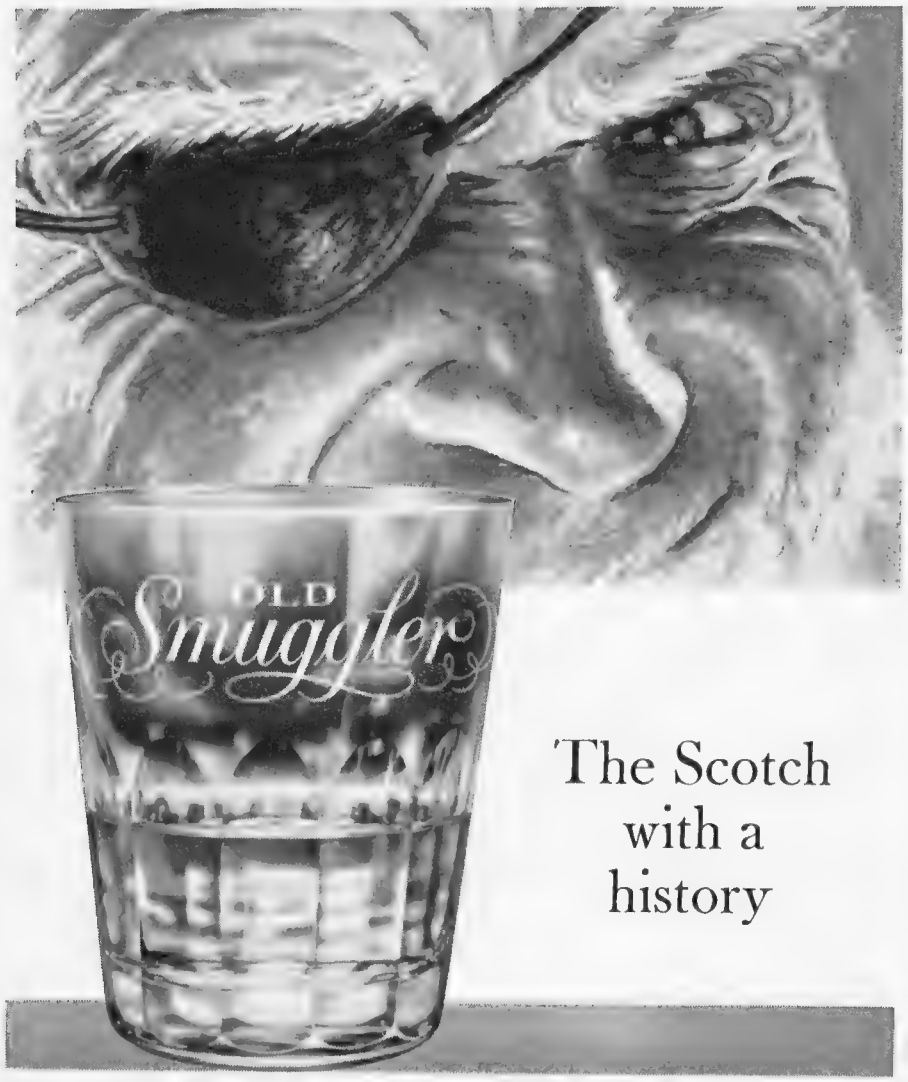
The Lion of Judah's Hot-footing Hero

The emperor's pets at the royal palace in Addis Ababa both have stout hearts and the same kind of fur trappings. One, a full-grown Ethiopian lion named Mekaria, is the pride and joy of Haile Selassie I, King of Kings, Conquering Lion of Judah. The other is 29-year-old Abebe Bikila, a corporal in his majesty's Imperial Bodyguard and the world's most phenomenal long distance runner. Two years ago in Rome he bowled over the experts by running and winning the Olympic marathon in his bare feet. Recently, Bikila said goodby to Mekaria and the emperor, and he departed for Europe's capitals to prove beyond any doubt that his Olympic triumph was something he could repeat without taking a deep breath.

ETHIOPIAN RUNNER
CONTINUED

As a boy, Abebe Bikila caught pheasants for the family by chasing birds until they fell exhausted. He developed such endurance that now, after he has led teammates on 20-mile training jaunts in Ethiopia's rugged hills (he is in center above), his pulse beats little faster than it did when he started.

OLD SMUGGLER



The Scotch with a history

LIFE SELLS PACE-SETTERS. If all cars owned by the readers of LIFE International and LIFE En Español (84 per 100 LIFE families) were placed bumper to bumper, you'd have one of the most distinguished parades—and one of the most formidable traffic jams in the history of going places. Fortunately, for the world's traffic situation, there's only one place where the pace-setters of the world gather at one time. That's why 32 of the world's leading automotive and accessory advertisers invested over $1,300,000 in the pages of LIFE's International Editions during 1961.

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ETHIOPIAN RUNNER CONTINUED

Starting his current tour in Sweden, Abebe Bikila astonished spectators by doing calisthenics for 10 minutes right after shattering the record for the one-hour run. Going on to Berlin, Bikila predicted that his countryman, Mamo Wolde (No. 3 above), would win the 10,000 meters. Near the finish, Bikila slowed down to make good his prediction, gave his colleague a victory hug (*right*) and said, "I could go out and run another 10,000 meters if I had to."

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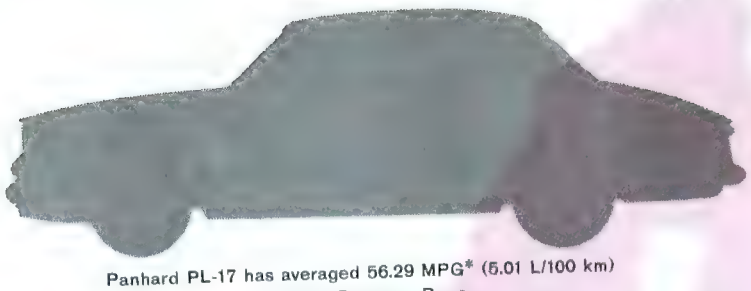
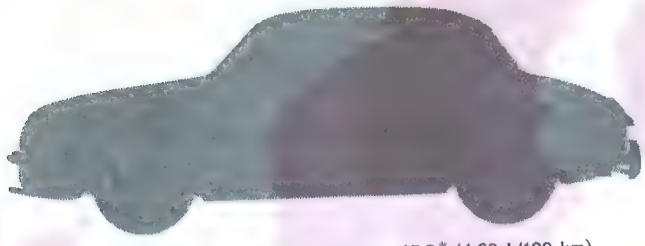
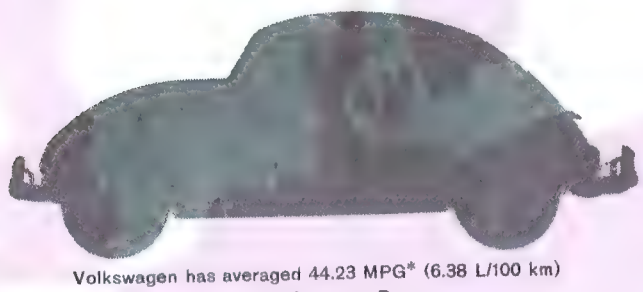


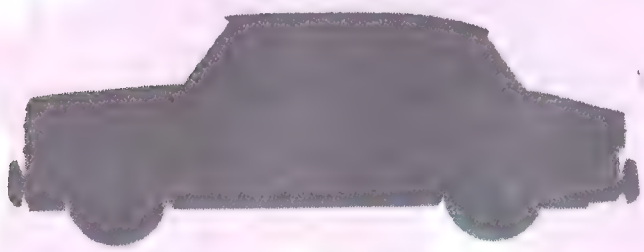
Panhard PL-17 has averaged 56.29 MPG* (5.01 L/100 km)
in Mobil Economy Runs



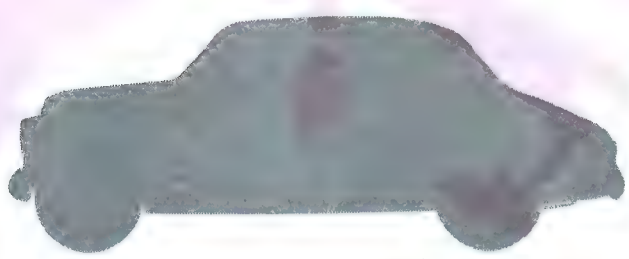
Renault Gordini has averaged 60.24 MPG* (4.69 L/100 km)
in Mobil Economy Runs



Volkswagen has averaged 44.23 MPG* (6.38 L/100 km)
in Mobil Economy Runs



Fiat 1100 has averaged 42.95 MPG* (6.57 L/100 km)
in Mobil Economy Runs



Lancia Appia has averaged 42.42 MPG* (6.65 L/100 km)
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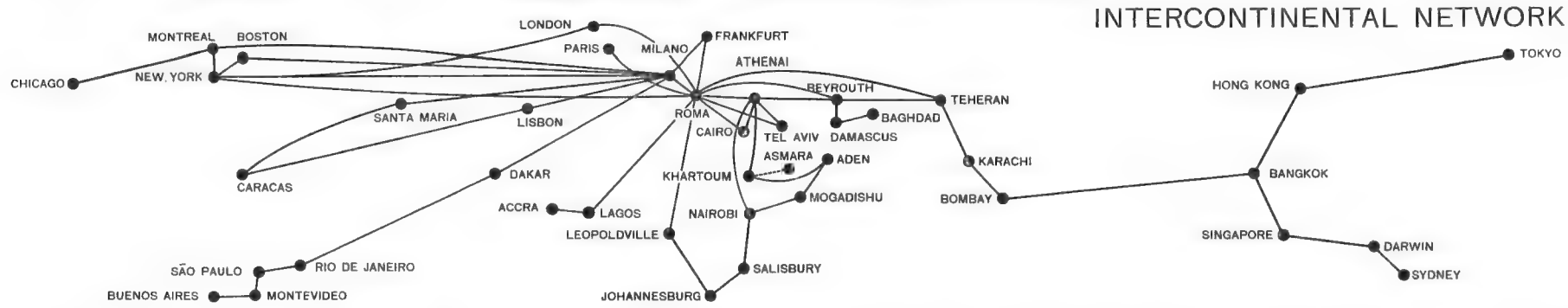

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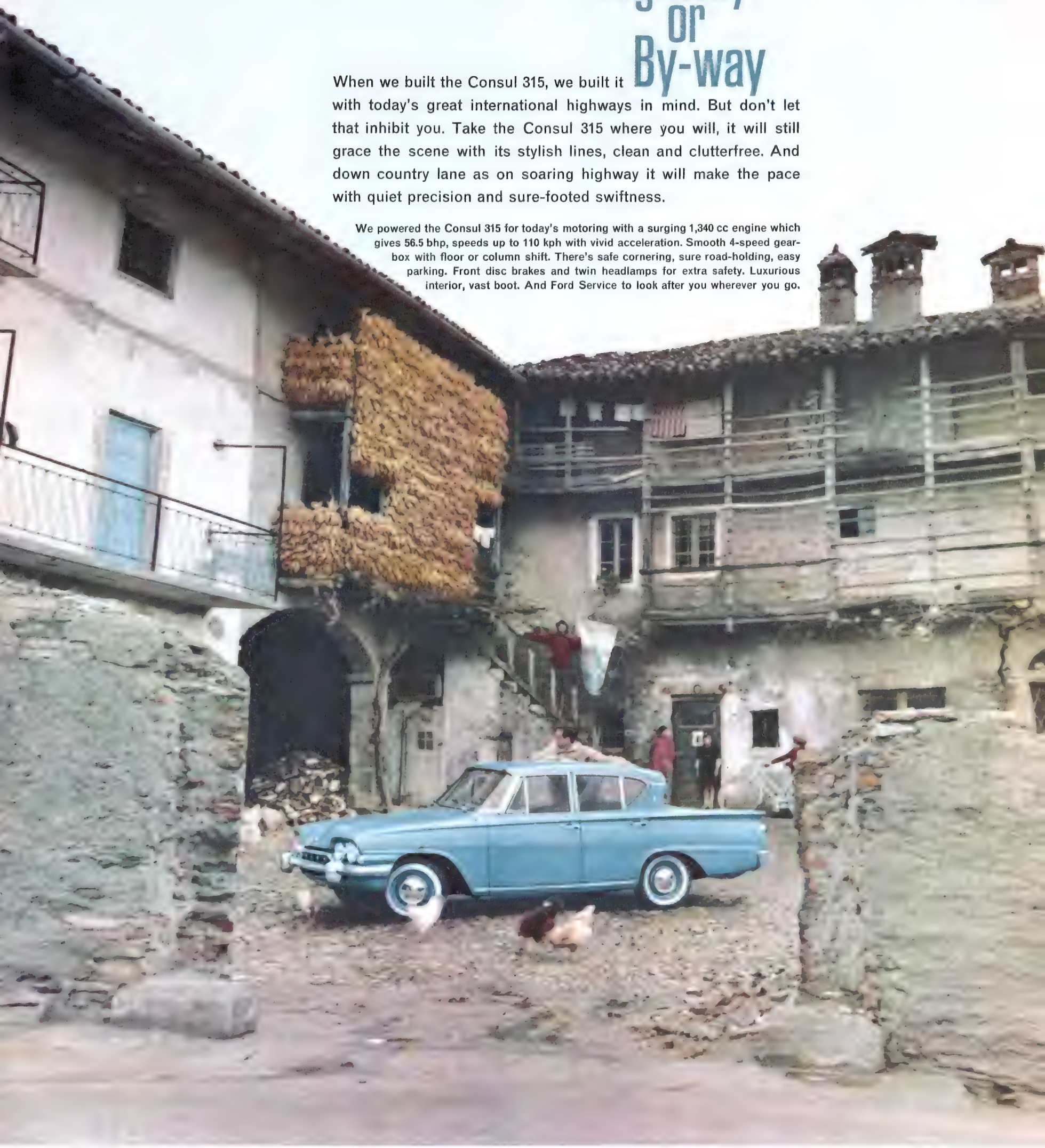
When we built the Consul 315, we built it with today's great international highways in mind. But don't let that inhibit you. Take the Consul 315 where you will, it will still grace the scene with its stylish lines, clean and clutterfree. And down country lane as on soaring highway it will make the pace with quiet precision and sure-footed swiftness.

We powered the Consul 315 for today's motoring with a surging 1,340 cc engine which gives 56.5 bhp, speeds up to 110 kph with vivid acceleration. Smooth 4-speed gear-box with floor or column shift. There's safe cornering, sure road-holding, easy parking. Front disc brakes and twin headlamps for extra safety. Luxurious interior, vast boot. And Ford Service to look after you wherever you go.



INT.F.24

SET THE STYLE - MAKE THE PACE - WITH THE **CONSUL 315**

E 11

The zest of the game, the thrill of the sport, tense excitement. And then – quiet relaxation with a cigarette.

People find in famous Pall Mall what they enjoy most – flavour, mildness, King Size coolness.

WORLD FAMOUS

WHEN THEY SMOKE - THEY SMOKE PALL MALL

FASHION

Elsa Martinelli compromises between the two extremes of nightwear in a short peignoir finished off with marabou, the tail and wing feathers of the African stork. Reminiscent of Edwardian elegance, the peignoir is Elsa's favorite of the new lingerie styles.

All or Nothing Nighties

Not until the end of the 15th Century did people think much about what to wear to bed. Before that they sometimes hopped into bed in their day clothes but mostly they wore nothing, which is just what Italian Actress Elsa Martinelli will be wearing when she undrapes the toga she is modeling on the cover. The toga, a floor-length wrap of white silk crepe, is a highly specialized item, meant obviously only for ladies who sleep in the nude. Not many ladies, however, can stand this kind of stark exposure. Even Anne Boleyn is said to have resorted to a black silk nightgown trimmed with velvet to hold the wandering eye of Henry VIII, and Josephine delighted Napoleon by being as fussy about her nighties as she was about her court gowns. Once women latched onto nighties they took to wearing as many clothes to bed as they did in the daytime, voluminous gowns with lace and ruffles, but the new nightwear leaves it strictly to a lady's discretion whether to bare all or nothing for bed.

CONTINUED 73

Elsa achieves a covered-up look (*above*) in a peignoir made of triple-layered nylon with a flattering collar of ostrich feathers. Floor-length, it is worn here with a matching nylon nightgown.

Along with the nightwear Elsa likes the simple nylon bra and pants outfit designed by her countryman, Emilio Pucci. Like his silk jersey dresses, the print outfit is unlined and unboned.

SOLVIL AND TITUS OF GENEVA

When you "Play Fish", time is part of the thrill

The fish you are after belongs to the fascinating world of the sea. You do not! You can live and have fun beneath the sea for only a definite number of minutes and it is important that you know exactly how many. Solvil and **Titus** - one of the leading names in the watchmaking tradition of Geneva - thought of this and created Calypso-Matic, the finest watch you can find for underwater sport. Calendar, automatic, shock-proof (incabloc system), antimagnetic and (of course) superwaterproof, it is guaranteed down to 660 feet, much deeper than any man can dive! The dial with luminescent figures provides full "readability" in the dark, and the special adjustable crown - here is your security - gives you perfect control of your immersion time.

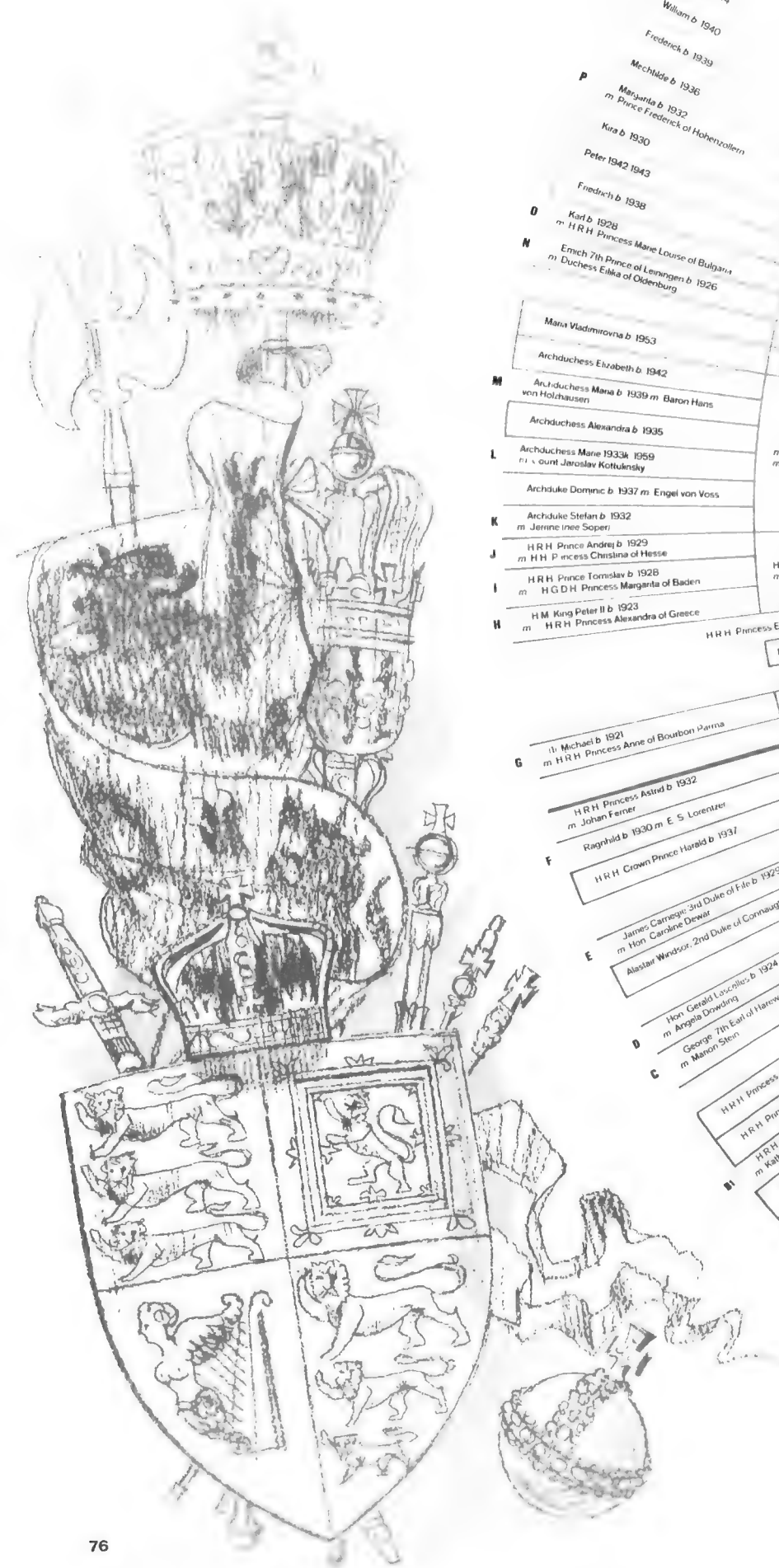
N. B. The Calypso-Matic is but one of the recent achievements by Solvil and **Titus**. You have a choice among many other time pieces in gold or stainless steel, for ladies or for gentlemen. For instance, a waterproof automatic **Titus** Transistor will superbly meet all vour requirements for town and sport. So will any Solvil and **Titus** watch, if you select it according to your way of life. One Solvil and **Titus** watch is designed and built for you ... even if you are not an underwater sports fan.

At leading jewelers in all countries.

Calypso-Matic	Sw. Fr. 195.—
Transistor	Sw. Fr. 175.—

All **Titus** watches are insured against theft and total breakage by Lloyd's of London, for one year.

Royal Population Explosion



H.M. Queen Victoria 1819-1901

H.R.H. Prince Alfred Duke of Edinburgh 1844-1900 m H.I.H. Grand Duchess Marie Alexandrovna of All the Russias

H.R.H. Prince Arthur Duke of Connaught 1850-1942 m H.R.H. Princess Louise of Prussia

H.R.H. Princess Beatrice 1857-1944 m H.R.H. Prince Henry of Battenberg

H.M. King Edward VII 1841-1910 m Princess Alexandra of Denmark

H.R.H. Princess Victoria Eugenie b 1887 m H.M. King Alfonso XIII of Spain

H.S.H. Prince Maurice of Battenberg 1891 k 1914

Lord Leopold Mountbatten 1889-1922

M of Carisbrooke 1896-1960 m Lady Irene Denison

H.R.H. Princess Louise 1848-1939 m Duke of Argyll

Lady Ina Mountbatten b 1920 m. 1st Hamilton O Malley m. 2nd Michael Bryan

Lord Robin b 1957

H.M. King George V 1865-1936 m H.S.H. Princess Mary of Teck

H.R.H. Albert Duke of Clarence 1864-1892

Alexandra 1876-1942 m H.S.H. Ernest 7th Prince of Hohenlohe-Langenburg

Victoria Melita 1876-1936 m 1st H.R.H. Ernest Grand Duke of Hesse m. 2nd H.I.H. Grand Duke Cyril Vladimirovitch of Russia

H.R.H. Princess Beatrice b 1884 m H.R.H. Infante Alfonso de Spain 3rd Duke of Galtiere

H.R.H. Prince Arthur 1883-1938 m H.H. Princess Alexandra Duchess of Fife

H.R.H. Princess Margaret 1882-1920 m H.M. Gustav VI Adolf of Sweden

Lady Patricia Ramsay b 1886 m. Adm Sir Alexander Ramsay

Alexander Ramsay b 1919 m. Hon Flora Fraser

Alice b 1961

Katharine b 1957

Anne-Marie b 1946

Benedikte b 1944

Margarethe b 1940

2 Michael Sayard Count of Wisborg b 1944

Christina b 1943

Desiree b 1938

Birgitta b 1937 m. Prince Johann Georg of Hohenzollern

Margaretha b 1934 m. Prince Sigvard Bernadotte

Crown Prince Carl Gustaf b 1946

Ingrid b 1910 m. H.M. King Frederick IX of Denmark

Carl, Count Bernadotte b 1916 m. Elin nee Wylmark

Berti, Duke of Halland b 1912 m. 1st Erika nee Patzek m. 2nd Sonja nee Robbert

Sayard, Count Bernadotte b 1907

Gustav Adolf 1906-1947 m. H.H. Princess Sibylla of Saxe-Coburg Gotha

Alastair Windsor, 2nd Duke of Connaught 1914-1943

Alastair b 1913 k 1935

Alonso 1912 k 1936

Alvaro Prince of Orleans Bourbon 4th Duke of Galliera b 1910 m. Carla nee Delfino

Ilsma b 1902

Alexandra b 1901

Maud b 1869 m. H.H. Wilhelm Duke of Schleswig-Holstein Glucksburg

Alfred b & d 1911

Gottfried 8th Prince of Hohenlohe Langenburg 1907-1960 m. H.R.H. Princess Margarita of Greece

2. Grand Duchess Kira Kirillovna b 1909 m. H.R.H. Louis Ferdinand of Prussia

2. Grand Duchess Marie Kirillovna 1907-1951 m. H.S.H. Friedrich 6th Prince of Leiningen

Beatrix b 1938

Albrecht b 1944 †

Ruprecht b 1944 †

George b 1938

Kraft b 1935

Xenia b 1949

Kira b 1943

Marie b 1942

Christian b 1946

Louis b 1944

William b 1940

Frederick b 1939

Mechtilde b 1936

Margarita b 1932 m. Prince Frederick of Hohenzollern

Kira b 1930

Peter 1942 1943

Friedrich b 1938

Karl b 1928 m. H.R.H. Princess Marie Louise of Bulgaria

Emich 7th Prince of Leiningen b 1926 m. Duchess Eilika of Oldenburg

Peter b 1922 m. Princess Marie of Schaumburg Lippe

Wolfdietrich 1919-1926

Hans b 1917 k 1944

Maria Vladimirovna b 1953

Archduchess Elizabeth b 1942

Archduchess Maria b 1939 m. Baron Hans von Holzhausen

Archduchess Alexandra b 1935

Archduchess Marie 1933 k 1959 m. Count Jaroslav Kottulinsky

Archduke Dominic b 1937 m. Engel von Voss

Archduke Stefan b 1932 m. Jerrine (nee Soper)

H.R.H. Princess Elizabeth of Hesse 1895-1903

(2) Vladimir Romanoff b 1917 m. Princess Leonida widow of S. M. Kirby

H.R.H. Princess Ileana b 1909 m. 1st H.I. & R.H. Anton of Austria m. 2nd Dr. Stefan Issarescu (no issue)

H.R.H. Princess Maria b 1900-1961 m. H.M. King Alexander of Yugoslavia

H.R.H. Princess Elizabeth 1894-1956 m. H.M. King George II of Greece

H.R.H. Prince Andrej b 1929 m. H.H. Princess Christina of Hesse

H.R.H. Prince Tomislav b 1928 m. H.G.D.H. Princess Margarita of Baden

H.M. King Peter II b 1923 m. H.R.H. Princess Alexandra of Greece

H.R.H. Prince Mircea 1913-1916

H.R.H. Prince Nicolas of Hohenzollern b 1903 m. Ioana Dolete

H.M. King Carol of Roumania 1893-1953 m. 1st Princess Helen of Greece m. 2nd Elena (nee Lupescu)

Mane, Queen of Roumania 1875-1938 m. H.M. King Ferdinand of Roumania

Alfred, Prince of Saxe Coburg & Gotha 1874-1899

H.R.H. Princess Maud 1869-1938 m. King Haakon VII of Norway

H.R.H. Princess Victoria 1868-1935

H.R.H. Louise, Princess Royal 1867-1931 m. Duke of Fife

H.R.H. Prince Alexander b. & d. 1871

H.R.H. Princess Victoria Melita b 1907 m. 1st Duke of Hamilton m. 2nd Duke of Leeds

H.R.H. Prince Andrew b 1882 m. Princess Alice of Battenberg

H.R.H. Princess Elizabeth b 1900 m. Count Nicholas Ourousoff

H.R.H. Princess Margaret 1930-2002 m. 1st Anthony Armstrong-Jones The Earl of Snowdon

H.M. Queen Elizabeth II b 1926 m. Philip Duke of Edinburgh

H.R.H. Prince Charles b 1948 m. 1st Lady Diana Spencer m. 2nd Camilla Parker Bowles

H.R.H. Princess Anne b 1950 m. 1st Mark Phillips m. 2nd Timothy Laurence

H.R.H. Prince Andrew b 1960 m. Sarah Ferguson

H.R.H. Prince Edward b 1964 m. Sophie Rhys-Jones

H.R.H. Princess Alexandra of Kent b 1936

H.R.H. Prince Michael of Kent b 1942

H.R.H. Edward 2nd Duke of Kent b 1935 m. Katharine Worsley

H.R.H. Prince Richard of Gloucester b 1944

H.R.H. Prince William of Gloucester b 1941

H.R.H. Princess Margaret b 1930 m. Anthony Armstrong-Jones The Earl of Snowdon

H.R.H. Princess Mary Princess Royal b 1897 m. 6th Earl of Harewood

H.R.H. Prince John 1905-1919

H.R.H. George Duke of Kent 1902 k 1942 m. H.R.H. Princess Marina of Greece & Denmark

H.R.H. Henry Duke of Gloucester b 1900 m. Lady Alice Montagu Douglas Scott

H.M. King George VI 1895-1952 m. Lady Elizabeth Bowes Lyon

H.M. King Edward VIII 1894-1972 m. Mrs. Wallis Simpson nee Warfield

Hon. Gerald Lascelles b 1924 m. Angela Dowding

George 7th Earl of Harewood b 1923 m. Marion Stein

James Carnegie 3rd Duke of Fife b 1929

Alastair Windsor, 2nd Duke of Connaught 1914-1943 m. Hon. Caroline Dewar

H.H. Maud 1893-1945 m. 10th Earl of Southesk

H.H. Alexandra 1891-1959 m. Prince Arthur of Connaught

H.M. King Olav V of Norway b 1903 m. H.R.H. Princess Martha of Sweden

H.R.H. Princess Astrid b 1932 m. Johan Ferner

Ragnhild b 1930 m. E. S. Lorentzer

H.R.H. Crown Prince Harald b 1937

(1) Michael b 1921 m. H.R.H. Princess Anne of Bourbon Parma

Cristina b 1911 m. Count Emesto Marone

Beatrix b 1909 m. Prince Alessandro Torlonia

Gonzalo 1914-1934

Juan, Count of Barcelona b 1913 m. H.R.H. Princess Marie of Bourbon Sicilies

Jaime Duke of Segovia b 1908 m. 1st Emanuela nee del Dayniere m. 2nd Charlotte Tiedemann

Alfonso 1907-1938 m. 1st Edelmira Sampedro-Ocejo m. 2nd Maria Rocafort

Anna b 1948

Maria b 1945

Giovanna b 1943

Victoria b 1941 m. Jose Carlos de Toledo

Olympia b 1943

Sandra b 1936 m. Clemente Lequio

Marino b 1939

Marco b 1937 m. Orietta Caracciolo

Margarita b 1939

Maria b 1936

Alfonso 1941-1956

Juan b 1938 m. Sophia of Greece

Gonzalo b 1937

Alfonso b 1936

DESCENDANTS OF VICTORIA

The world's population is increasing by 51 millions yearly, and the ingenious diagram (*left*) suggests that a lot of the newcomers are of royal blood. Prepared by Norris and Ross McWhirter, compilers of the *Guinness Book of Records*, the typographical cartwheel shows the progeny of a single royal marriage, that of Queen Victoria and Prince Albert, whose coats of arms appear left and right, respectively. The table should be read clockwise from center. Names in italics appear more than once, indicating descent from Victoria in more than one line. An m. is an abbreviation for married, b. for born, k. for killed, t. for twin. (1) and (2) indicate whether person is issue of first or second marriage. Big as the table is, it is not big enough: symbols on the outer edge are keys to the fifth and six generations, which have been crowded off to the next page. How many descendants are there? Count them.

m. H.R.H. Albert of Saxe-Coburg and Gotha 1819-1861

H.R.H. Princess Victoria, The Princess Royal 1840-1901 *m.* Frederick III, German Emperor and King of Prussia

H.R.H. Princess Alice 1843-1878 *m.* H.S.H. Louis IV, Regning Grand Duke of Hesse

H.R.H. Princess Helena 1846-1923 *m.* H.R.H. Prince Christian of Schleswig-Holstein

H.R.H. Princess Louise 1848-1939 *m.* 1871 John, Duke of Argyll

H.R.H. Prince Arthur 1850-1942 *m.* H.R.H. Princess Louise Margaret of Prussia

H.R.H. Prince Leopold, Duke of Albany 1853-1884 *m.* H.S.H. Princess Helen of Waldeck-Pyrmont

H.R.H. Princess Beatrice 1857-1944 *m.* Prince Henry of Battenberg

H.R.H. Princess Alice b. 1883 *m.* 1st Earl of Athlone

Charles Edward, late Reigning Duke of Saxe-Coburg-Gotha and Duke of Albany 1884 until 1919 1884-1954 *m.* H.H. Victoria of Schleswig-Holstein-Sonderburg-Glucksburg

Johann b. 1906 *m.* Baroness Feodora (née von der Horst)

Hubertus 1909 *k.* 1943

Friedrich b. 1918 *m.* 1st Countess Victoria (née Solms-Baruth) *m.* 2nd Dennyse (née de Murat)

H.H. Princess Sibylla b. 1908 *m.* H.R.H. Prince Gustaf Adolf, Duke of Westerbotten

Carolina b. 1912 *m.* 1st Count Friedrich Zu Castell-Rudenhausen *m.* 2nd Max Schmeling *m.* 3rd Jim Andrea (m. diss.)

Viscount Tremlett 1907-1928

H.S.H. Prince Maurice of Teck b. & d. 1910

Lady May Cambridge b. 1906 *m.* Sir Henry Abel-Smith

William II, German Emperor and King of Prussia 1859-1941 *m.* 1st H.H. Princess Augusta of Holstein-Sonderburg-Augustenberg *m.* 2nd (1922) H.S.H. Princess Hermine Reuss

Henry 1862-1929 *m.* H.G.D.H. Princess Irene of Hesse

Francois 1864-1866

Waldemar 1868-1879

Charlotte 1860-1919 *m.* H.H. Bernard, Duke of Saxe-Meiningen

Victoria 1866-1929 *m.* 1st H.S.H. Adolf of Schaumburg-Lippe *m.* 2nd Alexander Zubkov

Sophie 1870-1932 *m.* H.M. King Constantine I of the Hellenes

Margaret 1872-1954 *m.* H.R.H. Frederick, Landgrave of Hesse

Ernest Louis, Grand Duke of Hesse *m.* 1st H.R.H. Victoria Melita of Edinburgh *m.* 2nd H.S.H. Eleonore of Solms-Hohensolms Lich 1868-1937

Victoria Alberta 1863-1950 *m.* Louis Alexander, or Battenberg later 1st Marquess of Milford Haven, Admiral of the Fleet

Elizabeth (Feodorovna) 1864 *murdered* 1918 *m.* H.I.H. Grand Duke Serge of Russia

Irene 1866-1953 *m.* Henry, Prince of Prussia

Alix 1872 *murdered* 1918 *m.* H.I.M. the Emperor Nicholas II of Russia

Maria 1874-1878

H.H. Prince Christian 1867-1900

H.H. Prince Albert of Schleswig-Holstein 1869-1931

H.H. Prince Frederick b. & d. 1876

H.H. Princess Helena-Victoria 1870-1948

H.H. Princess Marie-Louise 1872-1956 *m.* H.H. Prince Aribert of Anhalt

Frederick 1870-1873

Louise b. 1889 *m.* H.M. Gustav VI of Sweden

Waldemar 1889-1945 *m.* H.S.H. Princess Cecilie of Lippe

Sigismund b. 1896 *m.* Charlotte of Saxe-Altenburg

Henry 1900-1904

Alexis Czarevitch b. 1904 *murdered* 1918

Olga b. 1895 *murdered* 1918

Tatiana b. 1897 *murdered* 1918

Marie b. 1899 *murdered* 1918

Anastasia b. 1901 *murdered* 1918

H.R.H. Princess Alice b. 1885 *m.* H.R.H. Prince Andrew of Greece

Louis, Earl Mountbatten of Burma b. 1900 *m.* Hon. Edwina Ashley

Barbara b. 1920 *m.* H.R.H. Duke Christian of Mecklenburg-Schwerin

Frederick William 1882-1951 *m.* H.H. Duchess Cecilie of Mecklenburg Schwerin

Ettel Frederick 1883-1942 *m.* H.R. Duchess Sophie of Oldenburg

Adalbert "Count Lingen" 1884-1948 *m.* H.S.H. Princess Adelaide of Saxe-Meningen

Augustus William 1887-1949 *m.* H.H. Princess Alexandra of Schleswig-H Glucksburg

Oscar 1888-1958 *m.* Countess Ina (von Ruppin) (née Von Bassewitz-Levetzow)

Joachim 1890-1920 *m.* H.H. Princess Maria of Anhalt

Victoria Louise b. 1892 *m.* H.R.H. Ernest, Duke of Brunswick Luneburg

Waldemar 1889-1945 *m.* H.S.H. Princess Calixta of Lippe

Sigismund b. 1896 *m.* H.H. Princess Charlotte of Saxe-Altenburg

Henry 1900-1904

Feodora 1879-1945 *m.* Prince Henry XXX of Reuss

George II 1890-1947 *m.* Elizabeth of Roumania

H.M. Alexander I, 1893-1920 *m.* Aspasia Manos

H.M. King Paul I of the Hellenes b. 1901 *m.* Frederica, Princess of Brunswick

Helen b. 1896 *m.* H.M. King Carol of Roumania

Irene b. 1904 *m.* H.R.H. Prince Aymon, Duke of Aosta

Lady Katherine b. 1913 *m.* Richard Brandram

Frederick 1893 *k.* 1916

Maximilian 1894 *d.* 1914

Philip, Landgrave of Hesse b. 1896 (*t.*) *m.* H.R.H. Princess Mafalda of Italy

Wolfgang b. 1896 (*t.*) *m.* 1st Princess Marie of Baden, *m.* 2nd Ottilie (nee Moeller)

Richard b. 1901 (*t.*)

Christopher 1901 (*t.*) *k.* 1943 *m.* H.R.H. Princess Sophie of Greece

(2) George Donatus 1906 *k.* 1937 *m.* H.R.H. Princess Cecile of Greece

(2) Ludwig b. 1908 *m.* Hon. Margaret Geddes

(1) Elizabeth 1895-1903

George, 2nd Marquess of Milford Haven 1892-1938 *m.* Countess Nadejda (de Torby)

Louis, East Mountbatten of Burma b. 1900 *m.* Hon. Edwina Ashley

H.R.H. Princess Alice b. 1885 *m.* H.R.H. Prince Andrew of Greece

David, 3rd Marquess b. 1919 *m.* 1st Romaine Simpson (nee Pierce *m.* 2nd Janet Bryce)

Lady Tatiana Elizabeth b. 1917

Philip b. 1921 *m.* H.M. Queen Elizabeth II

Margarita b. 1905 *m.* H.S.H. Gottfried of Hohenlohe-Langenburg

Theodora b. 1906 *m.* Berthold Frederick, Margrave of Baden

Cecilie b. 1911 *k.* 1937 *m.* George Grand Duke of Hesse

Sophie *m.* 1st Prince Christopher of Hesse *m.* 2nd Prince George of Hanover

Barbara b. 1920 *m.* H.R.H. Duke Christian of Mecklenburg-Schwerin

Lady Patricia b. 1924

Lady Pamela b. 1929 *m.* David Hicks

Lady Prince of Burbourne *m.* 7th Baron Brabourne

H.M. Queen Elizabeth II

Prince Philip, Duke of Edinburgh

Prince Charles b. 1948

Princess Anne b. 1950

Prince Andrew b. 1960

Prince Edward b. 1964

Princess Alexandra b. 1936

Angus Ogilvy b. 1928

James b. 1964

Marina b. 1966

Victoria Louise b. 1892 *m.* H.R.H. Ernest, Duke of Brunswick Luneburg

Feodora 1879-1945 *m.* Prince Henry XXX of Reuss

Henry 1900-1904

Sigismund b. 1896 *m.* H.H. Princess Charlotte of Saxe-Altenburg

Waldemar 1889-1945 *m.* H.S.H. Princess Calixta of Lippe

Barbara b. 1920 *m.* H.R.H. Duke Christian of Mecklenburg-Schwerin

Allred b. 1924

Princess Alexandra of Greece b. 1921 *m.* H.M. King Peter of Yugoslavia

Constantine, Crown Prince b. 1940

Sophie b. 1938 *m.* Juan Carlos of Barcelona

Irene b. 1942

Michael b. 1921 *m.* H.R.H. Princess Anne of Bourbon Parma

Amadeo, Duke of Aosta b. 1943

Richard Brandram b. 1948

Maurice b. 1926

Henry b. 1927

Otto b. 1937

Elizabeth b. 1940

Charles b. 1937

Rainer b. 1939

Christina b. 1933 *m.* H.R.H. Prince Andrej of Yugoslavia

Dorothea b. 1934 *m.* H.S.H. Prince Friedrich Windisch Graetz

Clarissa b. 1944

Louis b. 1931 *k.* 1937

Alexander b. 1933 *k.* 1937

Johanna b. 1936 *d.* 1939

Christian b. 1919

Princess Alexandra of Isenburg Budingen

Frederica b. 1917 *m.* King Paul of the Hellenes

Barbara b. 1920 *m.* H.R.H. Duke Christian of Mecklenburg Schwerin

Richard b. 1933 *m.* Marcia Kendrew

Arne b. 1932 *m.* David Ludlell Grainger

Elizabeth b. 1936

William Frederick 1906-1940 *m.* Dorothea (née von Salviati)

Louis Ferdinand b. 1907 H.I.H. Grand Duchess Kira Kirillovna

Hubertus 1909-1950 *m.* 1st Maria v Humbolt-Dechrosden *m.* 2nd Princess Magdalene Reuss

Frederick George von Preussen b. 1911 *m.* Lady Brigid Guinness

Alexandrine b. 1915

Cecilia b. 1917 *m.* Clyde Harris

William Victor b. 1919 *m.* Countess Marie Hoyos

Victoria Marina b. 1917 *m.* Kirby Patterson

Alexander b. 1912 *m.* Irmgard (née Weygand)

Oscar 1915 *k.* 1939

Burchard b. 1917 *m.* Countess Eleanora Furger-Babenhausen

William b. 1922 *m.* Armgard (née Von Veltheim)

Hereld b. 1918 *m.* H.S.H. Prince Charles Von Curland

Charles b. 1916 *m.* 1st Princess Henriette of Carolath *m.* 2nd Luise Hartmann

Ernest Augustus b. 1914 *m.* H.H. Princess Ottrud of Schleswig Glucksburg

George b. 1915 *m.* H.R.H. Princess Sophia of Greece

Guell b. 1923 *m.* Princess Alexandra of Isenburg Budingen

Allred b. 1924

Princess Alexandra of Greece b. 1921 *m.* H.M. King Peter of Yugoslavia

Constantine, Crown Prince b. 1940

Sophie b. 1938 *m.* Juan Carlos of Barcelona

Irene b. 1942

Michael b. 1921 *m.* H.R.H. Princess Anne of Bourbon Parma

Amadeo, Duke of Aosta b. 1943

Richard Brandram b. 1948

Maurice b. 1926

Henry b. 1927

Otto b. 1937

Elizabeth b. 1940

Charles b. 1937

Rainer b. 1939

Christina b. 1933 *m.* H.R.H. Prince Andrej of Yugoslavia

Dorothea b. 1934 *m.* H.S.H. Prince Friedrich Windisch Graetz

Clarissa b. 1944

Louis b. 1931 *k.* 1937

Alexander b. 1933 *k.* 1937

Johanna b. 1936 *d.* 1939

Ernst b. 1935

Peter b. 1939

Marianne b. 1933 *m.* Michael Nielsen

(1) Andreas b. 1943

(2) Adrian b. 1955

(2) Maria b. 1949

(2) / Beatrice b. 1951

Crown Prince Carl Gustav b. 1946

Birgitta b. 1937 *m.* Prince Johann Georg of Hohenzollern

Margaretha b. 1934

Desiree b. 1938

Christina b. 1943

(1) Bertram b. 1932

(1) Konradin b. 1933

(2) Peter b. 1943

(1) Victoria b. 1935 *m.* Miles Huntington-Whiteley

(2) Calima b. 1938

(2) Dagmar b. 1940

PASSPORTS TO EASTERN TRADE

Three Banks have merged.
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Head Office: Hong Kong.
London Office: 9 Gracechurch Street, London EC3

MERCANTILE BANK LIMITED
Head Office: 15 Gracechurch Street, London EC3
West End Branch: 123 Pall Mall, London SW1

THE BRITISH BANK OF THE MIDDLE EAST
Head Office: 7 King William Street, London EC4

Group total assets exceed £478 million

DESCENDANTS
CONTINUED

A H.R.H. Charles, Prince of Wales *b.* 1948
H.R.H. The Prince Andrew *b.* 1960
H.R.H. The Princess Anne *b.* 1950

B David, Viscount Linley *b.* 1961

B1 Earl of St. Andrews *b.* 1962

C David, Viscount Lascelles *b.* 1950
Hon. James Lascelles *b.* 1953
Hon. Robert Lascelles *b.* 1955

D Henry Lascelles *b.* 1953

E David Carnegie, Earl of Macduff *b.* 1961
Lady Alexandra Carnegie *b.* 1959

F Haakon Lorentzen *b.* 1954
Ingeborg Lorentzen *b.* 1957

G Margaret *b.* 1949
Helen *b.* 1950
Irina *b.* 1953
Sophie *b.* 1957

H Alexander, Crown Prince *b.* 1945

I Nikola *b.* 1958
Katarina *b.* 1959

J Marco *b.* 1960
Marija *b.* 1957

K Archduke Christopher *b.* 1957
Archduke Peter *b.* 1959
Archduchess Ileana *b.* 1958
Archduchess Constanza *b.* 1960

L Countess Ileana *b.* 1958

M Johann *b.* 1960

N Charles Emich *b.* 1952
Andreas *b.* 1955
Melita *b.* 1951
Stephanie *b.* 1958

O Karl *b.* 1960

P Karl *b.* 1952
Albrecht *b.* 1954
Ferdinand *b.* 1960

Q Christoph *b.* 1949
Alexander *b.* 1953
Marita *b.* 1948
Ingeborg *b.* 1956

Q1 Carl Christian *b.* 1962

R Margarethe *b.* 1954
Renate *b.* 1957

R1 Carl Christian *b.* 1962

S Louise *b.* 1961

T Katharine *b.* 1961

U Ian *b.* 1959
Simon *b.* 1960

V Christa *b.* 1936 *m.* Peter Liebes
Felicitas *b.* 1934 *m.* Dinnies von der Osten

W *Xenia b. 1949*
Kira b. 1943
Marie b 1942
Christian b. 1946
Louis b. 1944
William b. 1940
Frederick b. 1939

X Marie-Christine *b.* 1947
Anastasia *b.* 1944

Y Antonia (*t.*) *b.* 1955
Victoria *b.* 1947
Rupert (*t.*) *b.* 1955
William *b.* 1947
Frederick *b.* 1946

Z Kira *b.* 1954

aa Marie-Louise *b.* 1945
Adalbert-Adelhart *b.* 1948

bb Dohna *b.* 1954
Marina-Adelaide (*t.*) *b.* 1948
Berengar (*t.*) *b.* 1948

cc Stephen *b.* 1939

dd Donata *b.* 1952
Oskar *b.* 1959
Wilhelm *b.* 1955

ee Victoria *b.* 1939
Michael *b.* 1944
Ernest *b.* 1940

ff (1) Francis Frederich *b.* 1944
(1) Francis Joseph (*t.*) *b.* & *d.* 1943
(1) Francis William (*t.*) *b.* 1943

gg A daughter, *b.* 1959
Olga *b.* 1958
Marie *b.* 1952
Ludwig *b.* 1955
Ernst *b.* 1954

hh Friederike-Elizabeth *b.* 1954
George *b.* 1949
Guelf *b.* 1947

ii Irene *b.* 1942
Sophie *b.* 1938 *m.* Juan Carlos of Barcelona
Crown Prince Constantine *b.* 1940

jj Donata *b.* 1956
Edwina *b.* 1960

kk *Crown Prince Alexander b. 1945*

ll *Sophie b. 1957*
Irina b. 1953
Helen b 1950
Margaret b. 1949

mm *Marija b. 1957*
Marco b. 1960

nn Marina *b.* 1960

oo (2) George Mountbatten, Earl of Medina *b.* 1961

pp Hon. Amanda Knatchbull *b.* 1957
Hon. Johanna Knatchbull *b.* 1955
Hon. Philip Knatchbull *b.* 1961
Hon. Miahael Knatchbull *b.* 1950
Hon. Norton Knatchbull *b.* 1947

qq Edwina *b.* 1961

rr *H.R.H Princess Anne b. 1950*
H.R.H. Prince Andrew b. 1960
H.R H. Charles, Princes of Wales b. 1948

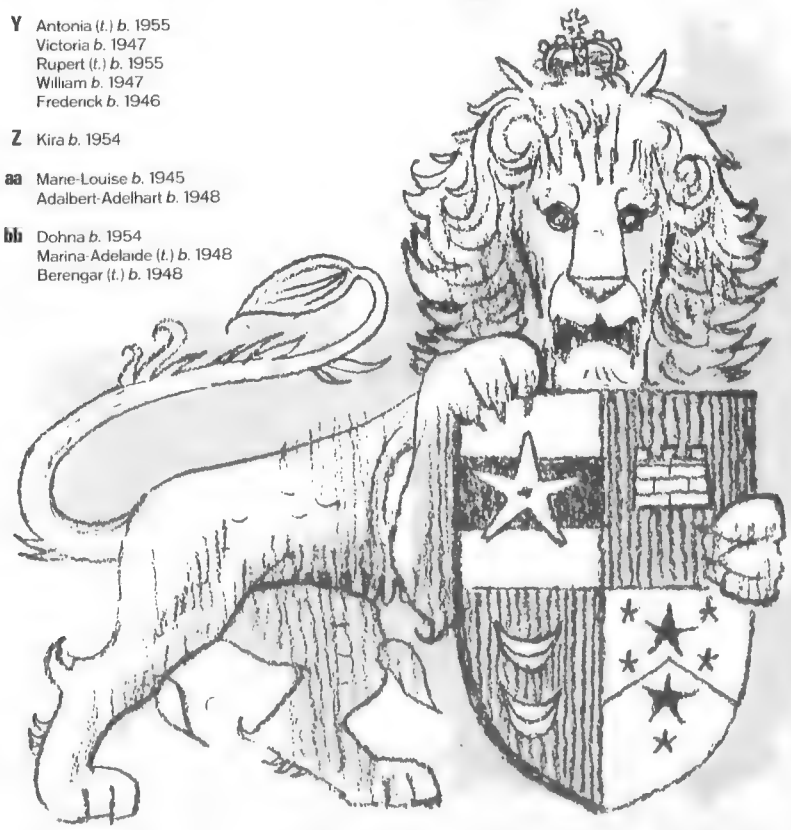
ss *Beatrix b. 1936*
Albrecht (t.) b. 1944
Ruprecht (t.) b. 1944
George b. 1938
Kraft b 1935

tt Margarita *b.* 1932 *m.* H.R.H. Prince Tomislav and has issue (i) Nikola *b.* 1958 (ii) Katarina *b.* 1959
Louis b. 1937
Louis *b.* 1937
Maximilian *b.* 1933

uu *Johanna b. 1935 d. 1939*
Alexander b. 1933 k. 1937
Louis b. 1931 k. 1937

vv (2) *Friederike-Elizabeth b. 1954*
(1) *Clarissa b. 1944*
(1) *Dorothea b. 1934 m. H.S.H. Pr. Friedrich Windisch Graetz*
(1) *Christina b. 1933 m. H.R.H. Pr. Andrej of Yugoslavia and has issue (i) Marija b. 1957 (ii) Marco b. 1960*
(2) *George b. 1949*
(2) *Guelf b. 1947*
(1) *Rainer b. 1939*
(1) *Charles b. 1937*

ww *Donata b. 1956*
Edwina *b.* 1960



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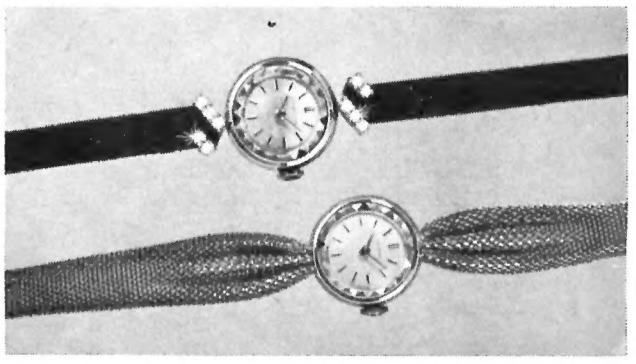

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IN THE NEXT ISSUE OF LIFE INTERNATIONAL

Impassioned genius of the Renaissance

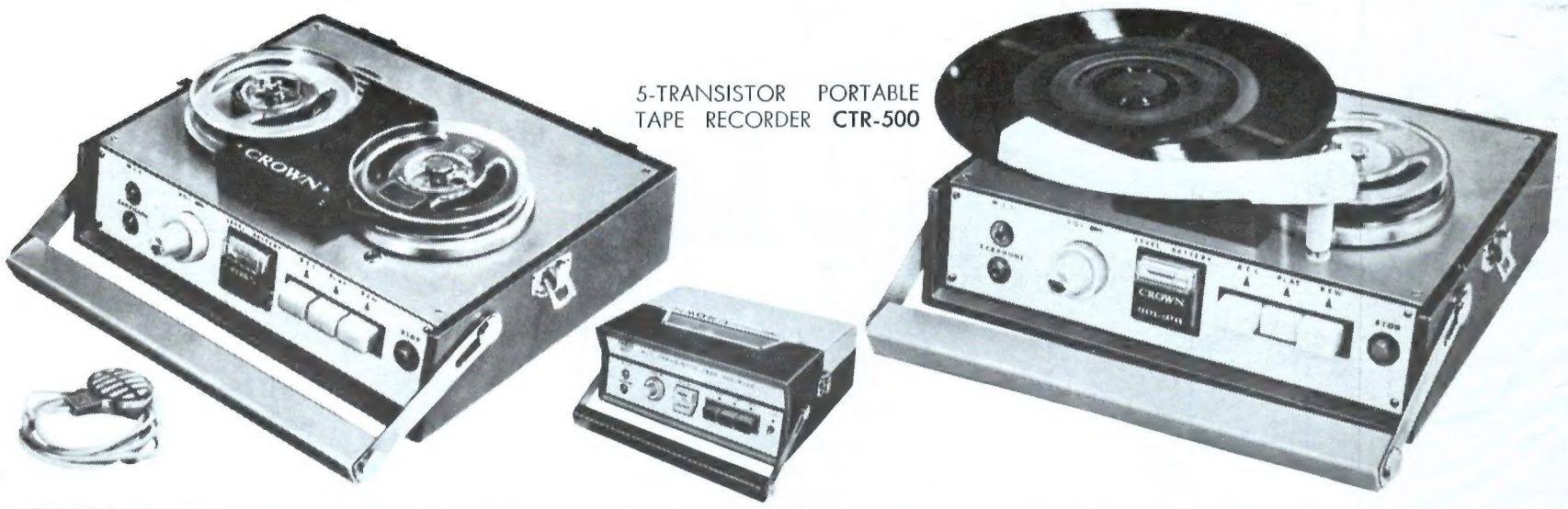
Andrea Mantegna exploded upon 15th-Century Italy a new vision of the world, in startling perspective and peopled with life-like figures such as those in his engraving, *Entombment*, a portion of which is shown at left. LIFE International will present 12 pages of his works.

Negro models: a band of chic pioneers

Autumn styles are being displayed in some leading New York fashion houses by beautiful Negroes like Liz Campbell (*right*), who formerly modeled only for Negro fashion magazines and stores. Color photos will show these trail-blazers stylishly smashing a racial bar.

ALSO IN THE NEXT ISSUE: ***LIGHTNING: NEW CLUES TO AN AGE-OLD MYSTERY***

Introducing.... "CROWNCORDER"



5-TRANSISTOR PORTABLE TAPE RECORDER **CTR-500**

CROWNCORDER is a compact all-transistor portable tape recorder that plays 45 rpm. records by attaching Turntable and Pickup*. The model drives a tape by a powerful DC motor, one touch push-button controls, and Level-Battery meter (a handy† guide for flawless recording); it records sounds by precision double track system reproducing them with high fidelity performance. The CROWNCORDER operates economically on Flashlite batteries or ordinary current with the help of AC adaptor. (*Optional)

Reel: 3″ Standard Reel. Recording Time: Double Track – 24 min. Output Power: 200 mW. (maximum). Speaker: 2 1/2″ Permanent Dynamic Speaker. Dimension: 3 3/4″×9 1/16″×7 1/16″ Weight: 4.6 lbs. (with batteries). Power Source: 1.5V Flashlite Battery×3 (4.5V) or AC.

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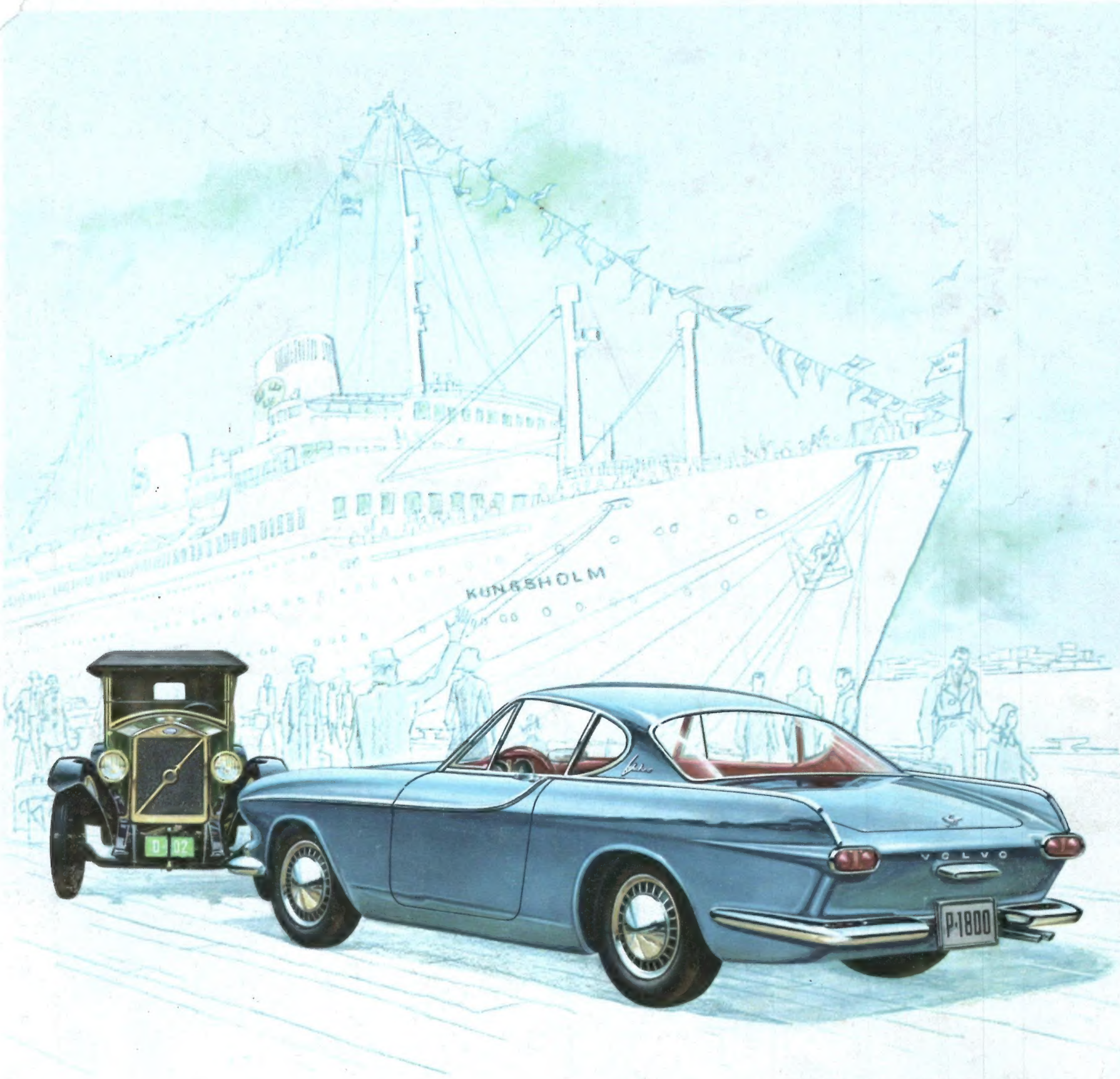

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